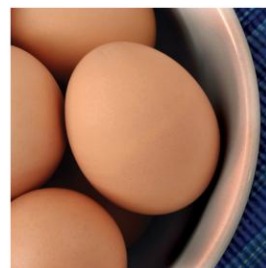


SERVING IT SAFE

TRAINER'S GUIDE

THIRD EDITION



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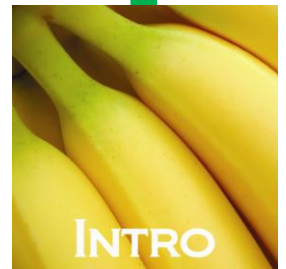
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INTRODUCTION

The *Serving It Safe Trainer's Guide* (“Trainer’s Guide”) provides an outline for conducting group training sessions using *Serving It Safe*. The five training sessions are shown below.

Sessions

The *Trainer's Guide* has five sessions for a total of 12 instruction hours. If time is available, more content from *Serving It Safe* can be presented and more activities from the *Trainer's Guide* can be used.

The Time Schedule for each session is based on the trainer using the selected activities noted. When Optional Activities have been suggested, the estimated time for using those activities is not included in the time estimate for the session. To estimate time for the sessions, it is assumed there will be 25-30 participants.

Keep in mind that the *Serving It Safe* manual is designed for use as a reference and the course book for the sessions. To completely cover all of the content and use all of the activities will require approximately 20 hours of training time. A school district can use the materials to present a series of training sessions of approximately 1-3 hours each.

Session 1: 3 hours and 20 minutes

- Introduction to *Serving It Safe*
- Chapter 1: Food Safety Is Top Priority
- Chapter 2: Prevent Foodborne Illness—Understanding Microorganisms

Session 2: 2 hours and 15 minutes

- Chapter 3: Basic Facts About Microorganisms

Session 3: 2 hours and 15 minutes

- Chapter 4: A Clean and Sanitary Foodservice Facility

Session 4: 2 hours and 35 minutes

- Chapter 5: A Process for Preventing Foodborne Illness

Session 5: 1 hour and 35 minutes

- Chapter 6: Food Safety Programs in Schools

Activities

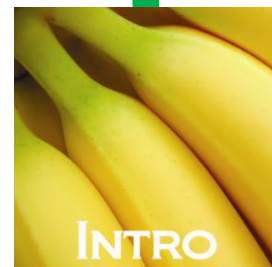
The *Trainer's Guide* includes a variety of activities that can be used by an individual participant or by a trainer in a group training session. The activities correspond to the six chapters of *Serving It Safe*.

Action Plans

Action Plans provide an opportunity at the end of each chapter for participants to describe how they will use what has been learned. The Action Plans should be completed independently by each participant.

Session Feedback Forms

Feedback Forms should be completed after each session. This feedback is anonymous and will assist the trainer in determining ways to improve the next session.



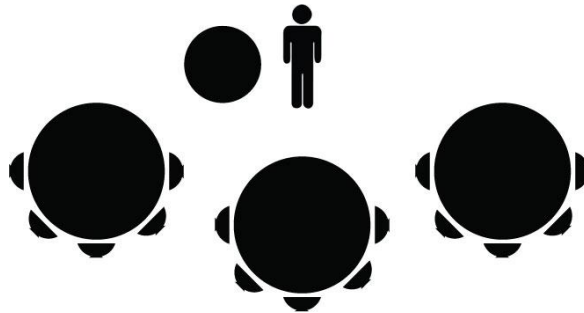
PREPARE TO PRESENT THE SESSIONS

1. Read through the *Serving It Safe Trainer's Guide* to decide how you will present the sessions. The sessions should be taught in sequence.
2. Decide when the sessions will be presented and provide ample notice to persons who will be expected to participate in the training.
3. Prepare for presenting the five sessions.
 - Before the session, select activities that fit the estimated time for the chapter. Using a variety of activities in a session provides a change of pace that energizes participants.
 - Practice explaining the directions for the activities and action plans, which are shown at the end of each chapter in the *Trainer's Guide*.
 - Using the *Trainer's Guide*, review the pages of the *Serving It Safe* manual.
 - Make notes in the *Trainer's Guide* to use when presenting the sessions.
 - Be ready to share information about state and local public health department regulations and local food safety policies and procedures.
 - Practice presenting the sessions in your own words using information from *Serving It Safe*.
4. Make a copy of each activity handout for every participant. See the Activity Section for each chapter.
5. Plan to obtain feedback from the participants **after each session**. Make a copy of the Session Feedback Form for each participant (the form is located at the end of each session). Collect the anonymous feedback forms at the conclusion of each session and review them to determine ways to improve the next session.
6. Set up the training room to promote adult learning.
 - Arrange seating for four or five people at a table (a small group). The small groups will have discussions as described in the *Trainer's Guide*.





- Place a small table at the front of the room for the trainer's use during the session. Avoid using a lectern since this ties the trainer to the front of the room and places a barrier between the trainer and the participants.



7. Use best practices to facilitate adult learning.
 - Be aware of what the participants **already know** about food safety. Find out their specific **needs** in the area of food safety through discussions.
 - Make sure the participants know **why** food safety is important and necessary to their success. *Serving It Safe* provides explanations of why various procedures are important to food safety.
 - Follow the *Trainer's Guide* to **involve** the participants. In addition to the activities that are planned, involve participants by asking questions and leading discussions.
 - Use **coaching** during activities as a way to provide individual attention and encouragement.
 - Give **feedback** to the group and to individuals.
 - After explaining directions for an activity, use a **communication check** to be sure participants understand what is to be done. Call on participants by name to tell the class what is to be done. If a participant does not recall the correct directions, explain the directions again.
8. Plan for comfort breaks as part of the session schedule. A three-hour session should include at least one 15-minute break. The time schedule for each session includes a suggested place in the content where a comfort break can be scheduled.
9. Begin and end each session on time.

SESSION 1: OVERVIEW

Objectives

Following the lesson, participants will be able to

- identify sources of potential biological contamination of food,
- describe a change to be made to prevent chemical contamination of food,
- describe a change to be made to prevent physical contamination of food,
- describe two changes to be made to prevent foodborne illness, and
- identify good practices already in place to prevent foodborne illness.

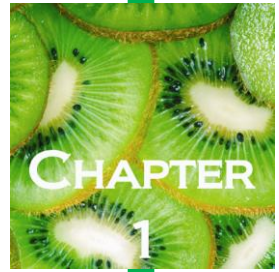
Materials Needed for the Trainer

- Serving It Safe* manual and *Serving It Safe Trainer's Guide*
- Flip chart, easel, and markers; chalkboard and chalk; or whiteboard and markers
- Materials required for selected activities

Materials Needed for Each Participant

- Place cards with participants' names on them to assign seating
- A copy of each activity handout
- Materials required for selected activities
- A copy of the Action Plan handout for Chapter 1 and Chapter 2
- A copy of the Session Feedback Form
- Pen or pencil

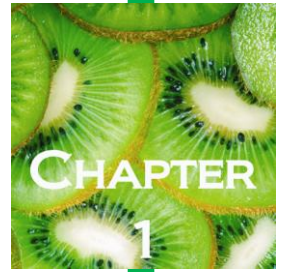
Place a set of the materials at each assigned place before the session begins.



Time Schedule: Session 1

3 hours and 20 minutes

Section Title	<i>Serving It Safe</i> Manual Page(s)	Time Estimate
<i>Serving It Safe</i> Introduction	1-3	30 minutes
Chapter 1	4-13	
Why is food safety a top priority?	5-6	5 minutes
What is foodborne illness and foodborne outbreak?	6	5 minutes
What must be done to keep food safe?	6-12	5 minutes
Activity (select one)	<i>(Trainer's Guide</i> pages 13-19)	15-30 minutes
Action Plan: Chapter 1	<i>(Trainer's Guide</i> pages 20-21)	10-15 minutes
Comfort Break		Trainer's Decision
Chapter 2	14-45	
Introduce the chapter.	16	5 minutes
What happens in the body after a contaminated food has been eaten?	16	5 minutes
How do harmful microorganisms contaminate foods?	17	5 minutes
What are the main causes of foodborne illness?	17-22	5 minutes
How can foodborne illness caused by microorganisms be prevented?	22-36	50-60 minutes
What are the responsibilities of the foodservice manager and employees?	36-37	5 minutes
How should the foodservice manager respond if symptoms of foodborne illness are reported to the foodservice operation?	37-40	35-45 minutes



Action Plan: Chapter 2

*(Trainer's Guide
pages 39-41)*

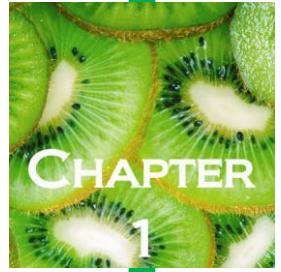
10-15 minutes

Session 1: Feedback Form

*(Trainer's Guide
pages 42-43)*

10-15 minutes

When there are optional activities available, the estimated time for using those activities is not included in the time estimate for the session.



LESSON PLAN: CHAPTER 1

Serving It Safe Introduction

Serving It Safe

Pages 1-3

30 Minutes

1. Introduce yourself and offer welcoming remarks. Complete any administrative requirements, such as roll call.
2. Point out the table of contents in the *Serving It Safe* manual and explain how to use it to find answers to questions about food safety.
3. Using the table of contents, describe how the chapters will be used in the training sessions.

Session 1: 3 hours, 20 minutes

Chapter 1: Food Safety Is Top Priority

Chapter 2: Prevent Foodborne Illness—Understanding Microorganisms

Session 2: 2 hours, 15 minutes

Chapter 3: Basic Facts About Microorganisms

Session 3: 2 hours, 35 minutes

Chapter 4: A Clean and Sanitary Foodservice Facility

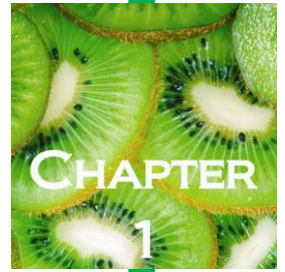
Session 4: 2 hours, 35 minutes

Chapter 5: A Process for Preventing Foodborne Illness

Session 5: 1 hour, 35 minutes

Chapter 6: Food Safety Programs in Schools

4. To begin the session, distribute copies of the Action Plan handouts for Chapter 1 and Chapter 2 to each participant. The Action Plans will be completed at the end of the discussion and activities.



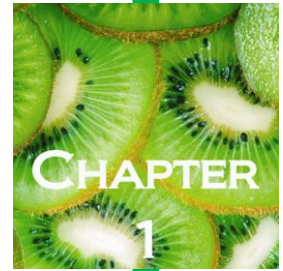
5. Ask participants to introduce themselves to the group by sharing the following information:
 - Name and job title
 - School and school district
 - Finish this sentence:
“I would like to know more about _____.”
(The sentence should describe some topic or area related to food safety.)

6. Explain any logistical information needed by the participants.



Chapter 1: Food Safety Is Top Priority

Total Time for Chapter 1 – 40 Minutes



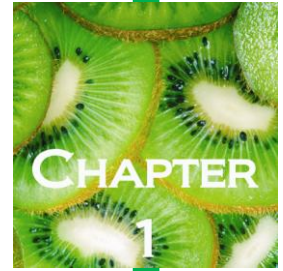
1. **Introduce** Chapter 1 by reviewing the objectives. Participants will
 - identify sources of potential biological contamination of food,
 - describe a change to be made to prevent chemical contamination of food, and
 - describe a change to be made to prevent physical contamination of food.

2. **Why is food safety a top priority?**
(*Serving It Safe* pages 5-6) (5 minutes)
Provide a summary of the content using your own words.

3. **What is a foodborne illness and foodborne outbreak?**
(*Serving It Safe* page 6) (5 minutes)
Provide a definition of foodborne illness and foodborne outbreak.

4. **What must be done to keep food safe?**
(*Serving It Safe* pages 6-12) (5 minutes)
Describe each hazard (biological, chemical, and physical) and give one or two examples of how to prevent contamination. Encourage participants to use this section as a reference.

5. **Activities**
(15-30 minutes)
Select an activity that meets the needs of the participants and fits the time available. Before the session, make copies of handouts as needed or assemble any other materials needed. Follow the directions to present the activity and discuss the activity after it has been completed. Begin and end every activity by relating the activity to the content that has been discussed.
 - **Activity 1: Could it happen in our foodservice facility?**
This activity is a quick and easy attention-grabber to be used at the beginning of the session. It is most effective if the news story is local.



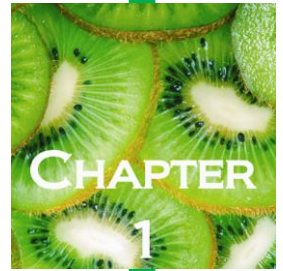
- **Activity 2: Where are the hazards?**
This activity is ideal for use after the discussion of the three categories of hazards.
- **Activity 3: Food Safety Risks**
This activity has many potential uses throughout the training sessions.
- **Activity 4: Food Safety Checklist**
(*Serving It Safe* pages 131-136)
This activity can be distributed and used as a homework activity before the next session.

6. Action Plan

(10-15 minutes)

Ask participants to turn to their Action Plan handout. Explain the Action Plan and relate the development of the plan to the objectives for Chapter 1. Allow participants to work independently for about 5 minutes. Lead a discussion by calling on several participants to share their answers to items 1, 2, and 3.

Some school districts may opt to collect the completed Action Plans and use them for documentation of participation in the training session. If this is done, copies of the completed Action Plans should be returned to the participants to allow them to implement their plans. Implementation will be enhanced if the school district director or another person can use the Action Plan and work with each participant to provide follow-up after the session.



ACTIVITIES: CHAPTER 1

How to Use the Activity Section

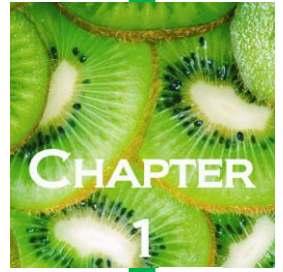
These activities can be used for independent learning or for small group work in a training session. The format for each activity is shown below.

- Chapter Number and Activity Number
- Title
- Purpose
- Estimated Time
- Materials
- Directions
- Follow-Up Discussion
- Answers

The activities will provide opportunities for participants to apply what they've learned and practice new skills. Using the activities as part of the training sessions will enhance learning and help prepare the participants to make changes that promote food safety.

Activities for Chapter 1: Food Safety Is Top Priority

- **Activity 1: Could it happen in our foodservice facility?**
(*Trainer's Guide* page 13)
- **Activity 2: What are the hazards?**
(*Trainer's Guide* pages 14-16)
- **Activity 3: Food Safety Risks**
(*Trainer's Guide* pages 17-18)
- **Activity 4: Food Safety Checklist**
(*Trainer's Guide* page 19; *Serving It Safe* pages 131-136)



Chapter 1, Activity 1: Could it happen in our foodservice facility?

Purpose: To generate a discussion regarding whether a reported outbreak of foodborne illness could happen in a foodservice facility

Estimated Time: 15 minutes to read the story and lead a short discussion

Materials: One written account of a documented outbreak of foodborne illness

Directions:

- **Group Activity:** This activity is useful to begin a discussion of the seriousness of an outbreak of foodborne illness and whether it could happen in any foodservice facility.
- Read a local newspaper article or use other foodservice sources to find one or more reports of documented outbreaks of foodborne illness. Check with your state and local public health department for reports of foodborne outbreaks. Bring the story to the training session and read it aloud to the group. In addition, the *CDC Mortality and Morbidity Weekly Report* may be another helpful resource. This report can be found online at http://www.cdc.gov/mmwr/mmwr_wk.html.
- After reading the article to the group, ask “could this happen in our foodservice facility?” Call on several participants to describe why they would answer **yes** or **no**. If the answer is **yes**, the participant should describe why. If the answer is **no**, the participant should explain what food safety measures are in place that would prevent such a problem from occurring.

Follow-Up Discussion: Use this activity to introduce content from *Serving It Safe*.



Chapter 1, Activity 2: What are the hazards?

Purpose: To introduce participants to the many potential hazards of food safety in a typical kitchen and to raise the level of awareness. Although the problems identified have serious consequences, the picture is amusing, so allow participants to have fun with this activity.

Estimated Time: 15-20 minutes

Materials: Each participant should have

- one copy of the What are the hazards? picture and
- a pencil or pen.

Directions:

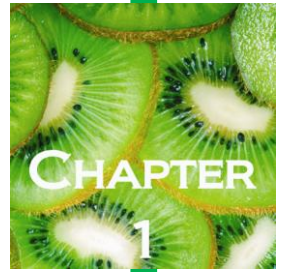
- **Independent Activity:** Working independently, the participants should view the picture and list all the food safety hazards.
- **Group Activity:** To use this activity in group training, divide the participants into pairs or small groups of three or four people. Working together, the participants should view the picture and list all the food safety hazards. Each group should be ready to present and discuss food safety hazards.

Follow-Up Discussion: Discuss the safety hazards identified and ways to avoid them. Chapter 1 and subsequent chapters will address these and many other food safety hazards.

Answers:

1. The server is not wearing a single-use glove over her bandaged hand.
2. She is wearing dangling earrings and a necklace.
3. She is not wearing any hair covering.
4. She is wearing nail polish.
5. Her clothing is soiled.
6. She is wearing inappropriate shoes.
7. There is rat poison on the storage shelf near serving utensils and food.
8. There are pests running about.
9. Pots are stored on the floor.
10. Utensils are stored right-side-up and uncovered.
11. Pot is boiling over.

12. Trash is on the floor.
13. Maintenance tools, such as mops and brooms, are not stored properly to prevent contamination of food and equipment.
14. Wood cabinet is used to store food and cooking utensils.



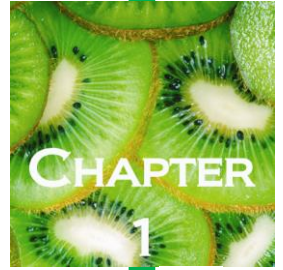
WHAT ARE THE HAZARDS?

PARTICIPANT HANDOUT



How many hazards can you find in this scene?





Chapter 1, Activity 3: Food Safety Risks

Purpose: To demonstrate that food safety and sanitation problems exist in every kitchen, even though an outside observer may not discover them

Estimated Time: 5 minutes to give directions and to have participants write their food safety risks. Using the food safety risks for problem solving can take from 15 to 30 minutes, depending on the number of risks discussed.

Materials: Each participant should have

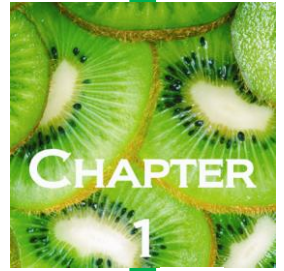
- one 3” x 5” note card or a small piece of paper and
- a pencil or pen.

Directions:

- **Group Activity:** This activity should be used with a group of at least 15 participants from more than one school.
- Distribute a note card to each participant. Explain that each participant should anonymously and independently write a one- or two-sentence description of a food safety risk—something that happens in the kitchen that is a threat to food safety but is not generally known. **The food safety risk should be stated so that it does not identify a person, a school, or a kitchen.** The note card should describe enough about a food safety risk that another person could understand why it is a threat to food safety.

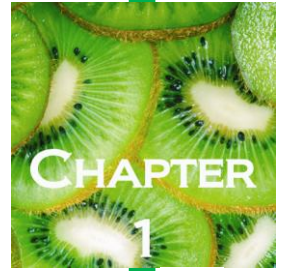
Example: “When we cook chili, we just roll the big pot into the freezer and let it sit there until the next day. We do not have time to put it in shallow pans or cool it in an ice bath.”

- The participants should have several minutes to write their food safety risk. They should then fold their card, and the trainer will collect them.



Follow-Up Discussion: There are several options for using this activity after the participants have generated the food safety risks.

- **Option 1:** Use this activity in the first session of a series of training sessions on food safety. Collect the cards and later group them by topic to be used for practice activities. An example of grouping follows.
 - Problems of cross-contamination
 - Problems of time-temperature control
 - Problems of personal hygiene
- **Option 2:** When a topic has been discussed, such as cross-contamination, distribute the food safety risks dealing with that problem. Distribute one food safety risk to each person or small group and have the individual or group decide how to apply what has been learned in order to solve the problem.
- **Option 3:** Collect the food safety risks immediately after participants have written them. Then redistribute the cards to small groups to decide how to solve the problem.



Chapter 1, Activity 4: Food Safety Checklist

Purpose: To provide participants an opportunity to assess their current use of food safety practices before learning more about ways to improve sanitation. This activity will raise the level of awareness of participants regarding the desirable sanitation procedures that should be in place to ensure food safety.

Estimated Time: 15 minutes to complete the checklist; 10 minutes for a group discussion

Materials: Each participant should have

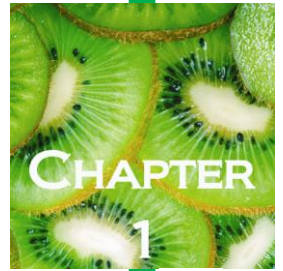
- a copy of the Food Safety Checklist (*Serving It Safe* pages 131-136) and
- a pencil or pen.

Directions:

- **Independent Activity:** Explain to the participants how to use the checklist.
“Using the Food Safety Checklist, think about the kitchen where you work and mark **Yes**, **No**, or **Corrective Action** for each item on the checklist. If you are not sure what to mark, mark **No** and then find out what is done in that area.”
- **Group Activity:** When using this activity with the group, read each item aloud, allowing a few seconds for participants to mark their answer.

Follow-Up Discussion: Discuss new procedures that participants noticed during the assessment.

Note: Participants keep the completed Food Safety Checklist as a baseline to compare with the Food Safety Checklist to be completed later in the training.



ACTION PLAN: CHAPTER 1

Instruction Sheet

Purpose: To provide an opportunity at the end of Chapter 1 for the participants to describe how they will use what has been learned

Estimated Time: 10-15 minutes

Materials: Each participant should have a copy of the Action Plan.

Directions:

- **Independent Activity:** This activity should be completed at the end of the discussion about Chapter 1.
- Explain the directions for completing the Action Plan. Allow participants to work independently to complete each item on their individual Action Plan.

Follow-Up Discussion: When everyone has completed their form, call on several participants to share one plan for change.

CHAPTER 1: FOOD SAFETY IS TOP PRIORITY ACTION PLAN

PARTICIPANT HANDOUT



You have completed *Serving It Safe*, Chapter 1: Food Safety Is Top Priority, and have been introduced to ways a food can become contaminated.

You should now be able to

- identify sources of potential biological contamination of food,
- describe a change to be made to prevent chemical contamination of food, and
- describe a change to be made to prevent physical contamination of food.

Directions: Answer the questions below to describe your plans to prevent foodborne illness.

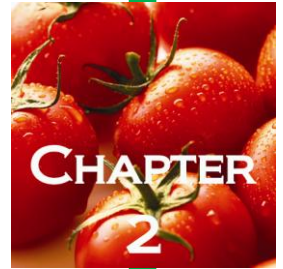
1. From our discussion of how harmful microorganisms can contaminate food, the source of contamination I would be most concerned about in our facility is (circle one)

- people,
- food,
- unsanitary facilities and equipment, or
- disease-spreading pests.

2. To improve the way we handle chemicals and to prevent chemical contamination of food or injury to an employee, we could change

3. To prevent physical contamination of food, we could change

Name: _____ Date: _____

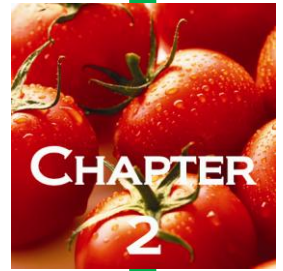


LESSON PLAN: CHAPTER 2

Chapter 2: Prevent Foodborne Illness— Understanding Microorganisms

Total Time for Chapter 2 – 2 Hours and 10 Minutes

- 1. Introduce** Chapter 2 by reviewing the objectives. Participants will
 - describe two changes to be made to prevent foodborne illness, and
 - identify good practices already in place to prevent foodborne illness.
- 2. Introduce** the topic of Chapter 2.
(*Serving It Safe* page 16) (5 minutes)
Use the text at the top of page 16 to introduce the chapter topic.
- 3. What happens in the body after a contaminated food has been eaten?**
(*Serving It Safe* page 16) (5 minutes)
Provide a summary of the content in your own words.
- 4. How do harmful microorganisms contaminate foods?**
(*Serving It Safe* pages 17) (5 minutes)
Provide a summary of the content in your own words.
- 5. What are the main causes of foodborne illness?**
(*Serving It Safe* pages 17-22) (5 minutes)
Summarize the three factors described. Call attention to one example for each factor.
- 6. How can a foodborne illness caused by microorganisms be prevented?**
(*Serving It Safe* pages 22-36) (50-60 minutes)
Explain that not all of the content on this topic will be discussed during the training session, but the participants should use the *Serving It Safe* manual to answer any questions.
 - a. Practice Good Personal Hygiene**
(*Serving It Safe* pages 22-23) (5 minutes)



Call attention to this topic, but do not go into detail since it is covered thoroughly in Chapter 4. Emphasize that it is the responsibility of the manager and director to establish rules for good personal hygiene and make sure that everyone follows them.

b. Control Time and Temperature of Foods

(Serving It Safe pages 23-28) (5 minutes)

Present a summary of the content in your own words.

Select content that addresses the needs of the participants and prepares them for participating in the activity that follows.

Activities

(15-25 minutes, each activity)

Two activities are provided for use when teaching how to use food thermometers. Select one or both activities, depending on the time available. The trainer can demonstrate both of the activities to save time. However, involvement of the participants in a practice activity is always more effective than demonstration.

- **Activity 1: Hands-On Temperature Taking**
- **Activity 2: How to Calibrate a Food Thermometer**

c. Prevent Cross-Contamination

(Serving It Safe pages 29-36) (10 minutes)

Select content that meets the needs of the participants.

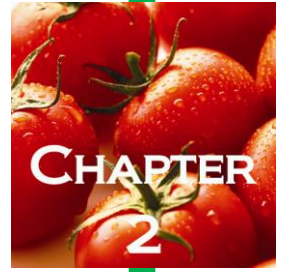
Present a summary of the content in your own words.

Activities

(15-25 minutes, each activity)

Three activities are provided for use with the content on preventing cross-contamination. Select one or more activities, depending on time available.

- **Activity 3: Bacteria Farm**
- **Activity 4: Cross-Contamination Matching Game**
- **Activity 5: Word Match**



7. What are the responsibilities of the foodservice manager and employees?

(Serving It Safe pages 36-37) (5 minutes)

a. Responsibilities of the Foodservice Manager

(Serving It Safe page 36)

Review the responsibilities, adding any responsibilities unique to the district or individual school sites.

b. Responsibilities of the Employees

(Serving It Safe page 37)

Review the responsibilities, adding any responsibilities unique to the district or individual school sites.

8. How should the foodservice manager respond if symptoms of foodborne illness are reported to the foodservice operation?

(Serving It Safe pages 37-40) (35-45 minutes)

Guidelines for the Foodservice Manager When Foodborne Illness is Suspected

(Serving It Safe pages 38-40) (20 minutes)

The guidelines shown in Chapter 2 should be adapted to those appropriate for the school district. Provide a handout of the school district's requirements or guidelines to participants. Explain the guidelines. Emphasize the importance of following the guidelines and referring to them when a foodborne illness is suspected.

Activity 6: Case Study—Field Trip Frenzy

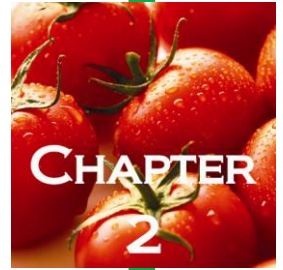
(15-25 minutes)

This activity provides an opportunity for participants to practice using the guidelines just discussed. Follow the directions for using this activity for a small group. To minimize the time needed for the activity, the trainer can lead a large group discussion of how to handle the situation in this activity.

9. Action Plan

(10-15 minutes)

Ask participants to turn to their Action Plan handout. Explain the Action Plan and relate the development of the plan for change to the objectives for Chapter 2. Allow participants to work independently for about 5 minutes. Lead a discussion by calling on several



participants to share answers to items 1, 2, 3, and 4.

Some school districts may opt to collect the completed Action Plans and use them for documentation of participation in the training session. If this is done, copies of the completed Action Plans should be returned to the participants to allow them to implement their plans. Implementation will be enhanced if the school district director or another person can use the Action Plan and work with each participant to provide follow-up after the session.

10. Summary

Bring the discussion of Chapter 2 to a close using the summary comments (*Serving It Safe* page 41). Announce the time and place for the next session.

11. Optional Assignments

Prevent Foodborne Illness Questionnaire

(*Serving It Safe* pages 43-45)

Using this questionnaire to assess the foodservice operation provides an immediate application of the content of Chapter 2. The Prevent Foodborne Illness Questionnaire should be completed before the next session. Ask participants to bring their completed questionnaires to the next session and be ready to share some of their findings. Plan time for sharing and discussing in the next session.

Daily Temperature Form—Internal Food Temperatures

(*Serving It Safe* page 163)

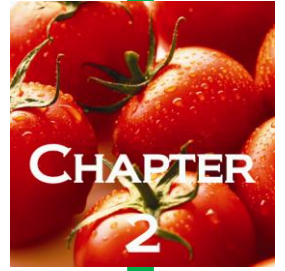
Using this temperature form to record food temperatures during meal service provides an immediate application of the content of *Serving It Safe* Chapter 2, pages 23-28. Assign participants to complete the Daily Temperature Form (*Serving It Safe* page 163) for one day's lunch menu. Ask participants to bring their completed Daily Temperature Form to the next session and be ready to share some of their findings. Plan time for sharing and discussing in the next session.

12. Session Feedback Form

(10-15 minutes)

Distribute a Session Feedback Form to each participant. Read aloud each item, explaining the response options. Allow participants to

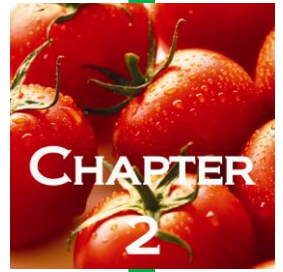
complete the form independently. Designate a table where participants may place their completed forms as they leave.

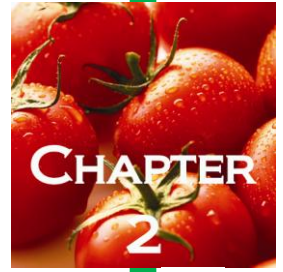


ACTIVITIES: CHAPTER 2

Activities for Chapter 2: Prevent Foodborne Illness—Understanding Microorganisms

- **Activity 1: Hands-On Temperature Taking**
(*Trainer's Guide* pages 28-29)
- **Activity 2: How to Calibrate a Food Thermometer**
(*Trainer's Guide* page 30)
- **Activity 3: Bacteria Farm**
(*Trainer's Guide* pages 31-33)
- **Activity 4: Cross-Contamination Matching Game**
(*Trainer's Guide* pages 34-35)
- **Activity 5: Word Match**
(*Trainer's Guide* pages 36-37)
- **Activity 6: Case Study—Field Trip Frenzy**
(*Trainer's Guide* page 38)





Chapter 2, Activity 1: Hands-On Temperature Taking

Purpose: To provide participants an opportunity to practice using food thermometers to determine the internal temperature of foods

Estimated Time: Time for the activity depends on the number of pairs of participants. Generally, the demonstration, practice, and discussion will take 15-25 minutes.

Materials:

- Enough dial or digital food thermometers for each pair of participants
- Sanitizing solution and paper towels or sanitizing wipes
- Materials relevant to Option 1 or 2

Option 1 (using food)

- Solid meat item such as a ham or turkey breast
- A steam table pan of hot food
- Convenience meat items such as beef patties or chicken nuggets
- A cold item such as coleslaw

Option 2 (using a food prop)

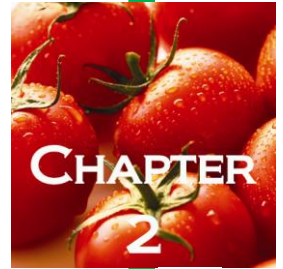
Stuff a beige, plastic grocery bag with popcorn or packing material. Tape it into the shape of a turkey breast. Place heavy plastic tape on several spots where the thermometer will be inserted. This will prevent the bag from tearing during practice. Have enough “turkey breast” props for each pair of participants.

Directions:

- **Group Activity (pairs):** Pair participants for practice on determining the internal temperature of a food item using a food thermometer.
 - Demonstrate how to clean and sanitize a food thermometer after each use.
 - Demonstrate how to take the temperature correctly in a solid meat item, in a steam table pan of hot food, and in a small item such as a beef patty or chicken nugget. Refer to *Serving It Safe* page 26.
 - Have pairs of participants practice taking the temperature of the various items.

Follow-Up Discussion: Ask participants to describe various situations during the day when the internal temperature of foods should be taken. Discuss the intervals that temperatures of foods should be taken during the holding and the serving period. Also, discuss how the internal temperatures of foods should be recorded on a daily temperature form to document temperature requirements. See *Serving It Safe* page 163 for a sample Daily Temperature Form—Internal Food Temperatures.





Chapter 2, Activity 2: How to Calibrate a Food Thermometer

Purpose: To prepare participants to routinely calibrate thermometers

Estimated Time: 15-25 minutes

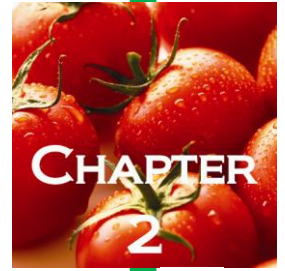
Materials: Each pair of participants should have

- a dial or digital food thermometer to share,
- sanitizing solution and paper towels or sanitizing wipes,
- a glass of crushed ice and water to share, and
- pliers or wrenches of the correct size to adjust the thermometers.

Directions:

- **Group Activity (pairs):** Pair participants to practice calibrating a food thermometer. The ice-water method is the easiest and safest for a group learning activity.
 - Demonstrate how to calibrate a thermometer using the ice-water method or the boiling-point method. If you are at a high altitude and are using the boiling-point method, adjust the boiling point temperature accordingly. See *Serving It Safe* page 27. Allow pairs of participants to practice calibrating food thermometers using the method preferred in the facility.

Follow-Up Discussion: After the demonstration and practice, ask several participants to describe the step-by-step process they used to calibrate a food thermometer. Also, discuss why it is important to keep thermometers calibrated and what can go wrong if a food thermometer is not registering the correct internal temperature of a food.



Chapter 2, Activity 3: Bacteria Farm

NOTE: This activity cannot be completed within the session time. Either preparation several days in advance is needed or a follow-up session is needed.

Purpose: To illustrate the many sources of bacteria in a typical kitchen

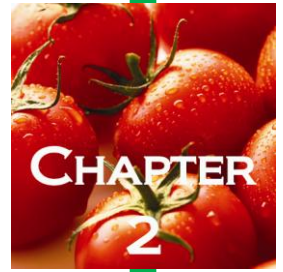
Estimated Time: It will take about 15-25 minutes to contaminate the Petri dishes. The bacteria will need to grow from several days up to a week in order to become visible. After bacteria have grown and are ready to be viewed, discussion should take 15-25 minutes.

Materials:

- Cotton swabs
- 5 or more Petri dishes with agar growing medium
 - Obtain Petri dishes with agar growing medium from the local public health department or school.
 - Alternatively, you can make your own growing medium for Petri dishes. Following are instructions for preparing a culture medium. (If you use more Petri dishes, you will need to increase the recipe for the growing medium.)
 1. Mix 2 teaspoons of unflavored gelatin (about 1 packet) and 2 teaspoons of sugar with 2/3 cup of water.
 2. Bring the solution to a boil and stir for 1 minute until contents are dissolved.
 3. Pour half an inch of the solution into each of the 5 Petri dishes.
 4. Cover the Petri dishes.

Directions:

- **Group Activity:** When planning this activity, determine where and how to dispose of the contaminated Petri dishes when the activity has been completed. Contact the local public health department or hospital to determine whether they will autoclave the Petri dishes to destroy the contaminants. The contaminated Petri dishes become a biological hazard after bacteria has grown in them. Do not use this activity without plans to properly dispose of the contaminated Petri dishes.

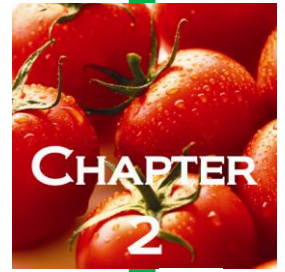


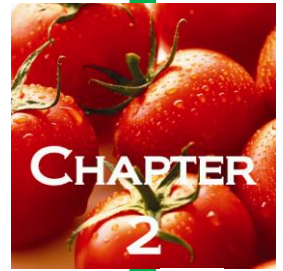
- Purchase or prepare the Petri dishes before the training session.
- Have cotton swabs available to use for contaminating the growing medium.
- Ask participants to suggest possible places where bacteria can be found. As a group, determine five places to collect samples of bacteria. Some possible sources of bacteria include: hair, hands, someone's ring, dead fly or cockroach, moisture from a cough or sneeze, an unwashed can opener blade, or the floor.
- Instruct participants to use cotton swabs to collect samples of bacteria from five different sources in the kitchen in order to grow the bacteria in a prepared medium in Petri dishes. Involve as many different participants as possible in swabbing different areas and contaminating the Petri dishes.
- After discussing sources of microorganisms, have participants follow the directions below to contaminate the growing medium in each Petri dish. If participants have chosen other sources of bacteria, follow the procedures described below to contaminate the growing medium in the Petri dish. Carefully label each Petri dish with the contaminant and cover it.
 1. Pluck a hair, open the Petri dish, and lay the hair on the surface of the medium; label "hair."
 2. Sneeze or cough into a Petri dish; label "sneeze" or "cough."
 3. Wipe a cotton swab around a nostril and carefully zigzag it across the medium in the Petri dish; label "nose."
 4. Wipe a cotton swab around the food contact area of a clean slicer and carefully zigzag it across the medium in the Petri dish; label "clean slicer."
 5. Wipe a cotton swab around a clean counter top and carefully zigzag it across the medium in the Petri dish; label "clean counter top."
 6. If using alternative contaminants, use the same procedure to collect additional samples from other areas in which bacteria may be present.
- After covering all the Petri dishes securely, store the contaminated Petri dishes in a warm environment (**away from a food preparation area**), at a constant temperature of 80 °F or above. Check the Petri dishes every 2 days. Do not allow growth to continue long enough for bacteria to outgrow the Petri dish.

Within a week, growth of bacteria should be obvious on the medium where the contaminant was spread.

Follow-Up Discussion: After the microorganisms have grown visibly in the Petri dishes, show them to participants. Lead a discussion about how food becomes contaminated. Emphasize that not all bacteria are harmful.

Sterilize the Petri Dishes: When the discussion has been concluded, seal the contaminated Petri dishes in a plastic bag, label it, and take it to the local public health department, hospital, or other facility where it can be autoclaved to kill the bacteria. **Do not discard the contaminated Petri dishes in the garbage since they would be biological hazards.**





Chapter 2, Activity 4: Cross-Contamination Matching Game

Purpose: To provide participants practice in determining where cross-contamination could occur

Estimated Time: 15-25 minutes for an independent activity and discussion

Materials: Each participant should have

- a copy of the Cross-Contamination Matching Game handout page and
- a pencil or pen.

Directions:

- **Independent Activity:** After discussing cross-contamination and giving examples of how it can occur, provide practice using this activity. This approach takes more time than a group activity but gives each participant the maximum learning opportunity.
- **Group Activity:** Assign small groups two or three of the contamination scenes. During the discussion, call on various participants to share their group's answers. This approach is much faster than an independent activity.
 - Distribute a copy of the game to each participant.
 - Explain the directions.
 - Allow participants to work at their own pace. After everyone has finished, lead a discussion of the answers.

Follow-Up Discussion: After the participants have completed the matching game, discuss the answers.

Answers:

- | | |
|------|-------|
| 1. E | 6. F |
| 2. H | 7. H |
| 3. F | 8. E |
| 4. E | 9. E |
| 5. F | 10. E |

CROSS-CONTAMINATION MATCHING GAME

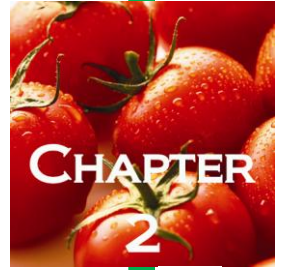
PARTICIPANT HANDOUT



Directions: This game will give you the opportunity to determine how a food became contaminated. In each description, the food was cross-contaminated and caused foodborne illness. Your task is to determine what you think is the most likely way it became cross-contaminated. Do not assume any information that is not included in the description. Beside each description, write either

- F** food-to-food cross-contamination,
H hand-to-food cross-contamination, or
E equipment-to-food cross-contamination.

	1. An employee chopped chicken for chicken stir-fry on a cutting board. The next food that was prepared on this cutting board was cantaloupe.
	2. A part-time employee prepared ham and cheese sandwiches without using single-use gloves.
	3. Freshly made, but undercooked scrambled eggs were added to a pan of scrambled eggs on the service line.
	4. The can opener was used to open canned tuna to make tuna salad sandwiches for a class picnic. The blade of the can opener had visible signs of food particles.
	5. Unwrapped leftover ham, stored on the bottom shelf of the refrigerator, was added to a macaroni salad recipe and served.
	6. Turkeys were thawed on the middle shelf of the refrigerator. Fresh cabbage was stored on lower shelves. A foodborne illness was traced to coleslaw made from the cabbage.
	7. A server who wore single-use gloves to serve pizza kept the gloves on while helping a child who spilled a tray. The server went back to the service line and continued to serve pizza wearing the same single-use gloves.
	8. The cashier had a terrible persistent cough. The manager felt that there was no risk of contaminating food because she was responsible only for setting up the service line and then cashiering.
	9. Employees were supposed to clean and sanitize the slicer after every use. However, after the cook responsible for sandwiches sliced the ham, cheese, and turkey bologna, she just wiped off the slicer. The next cook used the slicer to shred lettuce for taco salad.
	10. An unwashed mayonnaise jar was used to store leftover spaghetti sauce.



Chapter 2, Activity 5: Word Match

Purpose: To provide participants an opportunity to check their knowledge

Estimated Time: 15-25 minutes

Materials: Each participant should have

- one copy of the Word Match handout and
- a pen or pencil.

Directions:

- **Individual Activity:** Explain the directions. Complete item 1 together as a group to model the activity.
- Allow the participants to work independently. When everyone has completed the Word Match, discuss the answers.

Follow-Up Discussion: Call on various participants to share their answers. Relate answers to information learned in Chapter 2.

Answers:

1. B
2. C
3. D
4. A
5. E
6. G
7. F

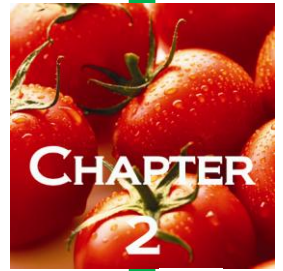
WORD MATCH

PARTICIPANT HANDOUT



Directions: Draw a line connecting the numbered item with the correct letter describing it.

- | | |
|-----------------------------------|--|
| 1. Personal hygiene | A. 41 °F to 135 °F |
| 2. Cross-contamination | B. Cleanliness of a foodservice employee |
| 3. Contaminated food | C. The transfer of harmful microorganisms from hand-to-food, food-to-food, or equipment-to-food |
| 4. Temperature danger zone | D. Food that contains harmful microorganisms, a harmful chemical, or a harmful physical substance |
| 5. Calibration | E. Checking and adjusting a food thermometer to be sure it registers the correct temperature |
| 6. Receiving procedure for milk | F. Cool cooked hot food from 135 °F to 70 °F within 2 hours and from 70 °F to 41 °F in an additional 4 hours for no more than a total cooling time of 6 hours. If the food has not reached 70 °F within 2 hours, it must be reheated immediately to 165 °F for 15 seconds. |
| 7. Correct way to cool a hot food | G. Open a carton and check the temperature when received |



Chapter 2, Activity 6: Case Study—Field Trip Frenzy

Purpose: To provide participants an opportunity to practice following the appropriate steps for responding to a possible outbreak of foodborne illness

Estimated Time: 15-25 minutes

Materials: None

Directions:

- **Group Activity:** Read the situation below aloud for the group. Explain that small groups should work together to decide what to do. They should refer to *Serving It Safe* pages 37-40 to apply what they have learned to this situation.

The foodservice manager's worst nightmare is coming to life. The sixth-grade class went on a field trip, and the cafeteria furnished reimbursable lunches to students who ordered them. The lunches were packed and picked up that morning and put on the bus. The children ate lunch around noon.

When the students returned to their classroom around 2:00 p.m., a couple of them complained of nausea, headaches, and achy muscles. Some students were vomiting and had to call parents to go home. Concerned that this could have been caused by the lunch, the teacher tells the principal, who immediately comes to the foodservice manager's office. The principal decides to call the local public health department because two or more students have reported the same symptoms, and all ate the school lunches packed for the field trip.

What should the manager do?

Follow-Up Discussion: Lead a group discussion of what the foodservice manager should do in this situation. The answer is to follow the school district guidelines. General guidelines to follow are included in *Serving It Safe* pages 38-40.

ACTION PLAN: CHAPTER 2

Instruction Sheet

Purpose: To provide an opportunity at the end of Chapter 2 for the participants to describe how they will use what has been learned

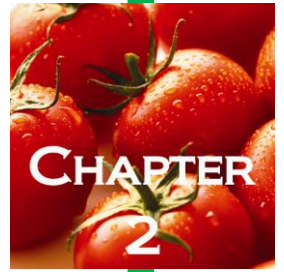
Estimated Time: 10-15 minutes

Materials: Each participant should have a copy of the Action Plan.

Directions:

- **Independent Activity:** This activity should be completed at the end of Chapter 2.
- Explain the directions for completing the Action Plan. Allow participants to work independently to complete each item on their individual Action Plan.

Follow-Up Discussion: When everyone has completed their form, call on several participants to share one plan for change.



CHAPTER 2: PREVENT FOODBORNE ILLNESS—UNDERSTANDING MICROORGANISMS ACTION PLAN PARTICIPANT HANDOUT



You have completed Chapter 2 and learned ways to prevent foodborne illness as well as how to respond should a foodborne illness be reported to your facility.

You should now be able to

- describe two changes to be made to prevent foodborne illness and
- identify good practices already in place to prevent foodborne illness.

Directions: Answer the questions below to describe your plans to prevent foodborne illness.

1. From our discussion of the three primary ways that foodborne illness can be prevented, what is the first way that needs work in our foodservice? (circle one)
 - Practice good personal hygiene.
 - Control time and temperature for foods.
 - Prevent cross-contamination.

2. Using the way to prevent foodborne illness that you just circled, describe two changes you will make in your foodservice to prevent foodborne illness.

	Change to be made?	Who is responsible?	When?
1.			
2.			

3. For which of the ways to prevent foodborne illness do you already have good practices in place? (circle one)
 - Practice good personal hygiene.
 - Control time and temperature for foods.
 - Prevent cross-contamination.

- Using the way to prevent foodborne illness that you just circled, describe how you know that good practices are already in place to prevent foodborne illness.

Name: _____ Date: _____

SESSION 1: FEEDBACK FORM

PARTICIPANT HANDOUT



Date: _____ School: _____

Part 1: Please respond to items 1-5 below. Circle the number to indicate your level of agreement with each item. If you **Completely Disagree**, circle 1, on the right. If you **Completely Agree**, circle 4, on the left. If your opinion is somewhere in between, circle 2 or 3.

	Completely Agree	Agree	Disagree	Completely Disagree
1. What I learned will be useful to me.	4	3	2	1
2. The trainer presented the material in a way I could understand.	4	3	2	1
3. The practice activities helped me to understand the material.	4	3	2	1
4. I have completed the Action Plan for the lesson(s) and will use it to make changes in my foodservice facility.	4	3	2	1
5. I learned some ways to improve food safety in my facility.	4	3	2	1

SESSION 1: FEEDBACK FORM (CONTINUED)

Part 2: Please answer the following questions.

1. What information discussed in this session will be most useful in your own foodservice facility?

2. Are there food safety topics you would like to know more about? Please describe in the space below.

After completing this form, place it on the table designated by the trainer.

Thank you for participating in this training session.

SESSION 2: OVERVIEW

Objectives

Following the lesson, participants will be able to

- identify foods on the menu that need improved handling in order to prevent foodborne illness and
- describe changes to be made to improve control of conditions for microorganism growth.

Materials Needed for the Trainer

- Serving It Safe* manual and *Serving It Safe Trainer's Guide*
- Flip chart, easel, and markers; chalkboard and chalk; or whiteboard and markers
- Materials required for selected activities

Materials Needed For Each Participant

- Place cards with the participants' names on them to assign seating
- A copy of each activity handout
- Materials required for selected activities
- A copy of the Action Plan handout for Chapter 3
- A copy of the Session Feedback Form
- Pen or pencil

Place a set of the materials at each assigned place before the session begins.



Time Schedule: Session 2

2 hours and 15 minutes



SESSION 2

Section Title	<i>Serving It Safe</i> Manual Page(s)	Time Estimate
Session 2 Introduction		10 minutes
Chapter 3	46-76	
What are the most common causes of foodborne illnesses?	48	5 minutes
What are the major foodborne illnesses caused by bacteria, and how can they be prevented?	49-57	20 minutes
What are the major foodborne illnesses caused by viruses, and how can they be prevented?	58-60	5 minutes
What are the major foodborne illnesses caused by fungi, and how can they be prevented?	61-62	5 minutes
What are the major foodborne illnesses caused by parasites, and how can they be prevented?	62-65	30 minutes
Comfort Break		Trainer's Decision
How do microorganisms grow?	65-74	40 minutes
Action Plan: Chapter 3	<i>(Trainer's Guide</i> pages 63-64)	10-15 minutes
Session 2: Feedback Form	<i>(Trainer's Guide</i> pages 65-66)	10-15 minutes

When there are optional activities available, the estimated time for using those activities is not included in the time estimate for the session.

LESSON PLAN: CHAPTER 3

Session 2 Introduction

10 Minutes

1. Introduce yourself and offer welcoming remarks. Complete any administrative requirements, such as roll call.
2. If an assignment was made in Session 1, follow up with a discussion of the assignment before beginning Chapter 3.
3. To begin the session, distribute a copy of the Action Plan handout for Chapter 3 to each participant. The Action Plan will be completed at the end of the discussion and activities.
4. Explain any logistical information needed by the participants.



Chapter 3: Basic Facts About Microorganisms

Total Time for Chapter 3 – 1 Hour and 45 Minutes



1. **Introduce** Chapter 3 by reviewing the objectives. Participants will
 - identify foods on the menu that need improved handling in order to prevent foodborne illness, and
 - describe changes to be made to improve control of conditions for microorganism growth.

2. **What are the most common causes of foodborne illnesses?**
 (*Serving It Safe* page 48) (5 minutes)
 Provide a summary of the content using your own words.

3. **What are the major foodborne illnesses caused by bacteria, and how can they be prevented?**
 (*Serving It Safe* pages 49-57) (20 minutes)
 The list of foodborne illnesses includes more detailed information than can be presented in a training session. A participant can use *Serving It Safe* at a later time to find information as needed. This part of the training session is set up as a participant-led discussion designed to familiarize participants with the foodborne illnesses, the foods involved in outbreaks, and prevention guidelines.

Participant-Led Discussion: Eight different foodborne illnesses are described. Depending on the number of participants in the session, assign one or more to provide a very short summary (2 minutes) of the information about the foodborne illness. Model the presentation of a summary using the foodborne illness: E. coli infection (*Serving It Safe* page 52).

Write the following list of groups on a flip chart page and review it for the participants before making the assignments. Assign one or more participants to provide a summary of information about the following foodborne illnesses.

- **Group 1:** Campylobacteriosis (*Serving It Safe* page 51)
- **Group 2:** E. coli infection (*Serving It Safe* page 52)
- **Group 3:** Listeriosis (*Serving It Safe* page 53)
- **Group 4:** *Perfringens* foodborne illness (*Serving It Safe* page 54-55)
- **Group 5:** Salmonellosis (*Serving It Safe* page 55-56)
- **Group 6:** Shigellosis (*Serving It Safe* page 56)



- **Group 7:** Staphylococcal foodborne illness (*Serving It Safe* page 57)

Bring this topic to a close by emphasizing the importance of participants following the guidelines for prevention. Also point out that only a health professional can diagnose a foodborne illness or prescribe treatment. The symptoms of these foodborne illnesses are described only to emphasize the seriousness of a foodborne illness and the importance of everyone in foodservice following food safety practices.

4. What are the major foodborne illnesses caused by viruses, and how can they be prevented?

(*Serving It Safe* pages 58-60) (5 minutes)

Provide a brief summary of the content using your own words.

Emphasize the importance of following guidelines for prevention.

5. What are the major foodborne illnesses caused by fungi, and how can they be prevented?

(*Serving It Safe* pages 61-62) (5 minutes)

Provide a brief summary of the content using your own words.

Emphasize the importance of discarding any food that appears to be moldy or has an unnatural color or smell.

6. What are the major foodborne illnesses caused by parasites, and how can they be prevented?

(*Serving It Safe* pages 62-65) (30 minutes)

Provide a brief summary of the content. Emphasize the importance of following guidelines for preventing foodborne illness. (5 minutes)

Activity 1: Case Study—Food Mystery

(25 minutes)

This activity provides an opportunity for participants to practice using what they have learned about guidelines for preventing foodborne illnesses. It is also a good change of pace between the discussion of foodborne illnesses and the discussion of how microorganisms grow.

Before the session, prepare enough sets of 14 clues for one set for each small group of four or five participants.



Follow the directions for the activity. After the activity has been completed, relate the activity to the guidelines for preventing foodborne illnesses.

7. How do microorganisms grow?

(*Serving It Safe* pages 65-74) (40 minutes)

a. Stages of Growth

(*Serving It Safe* pages 65-66) (5 minutes)

Ask participants to refer to pages 65-66 to see how a vegetative cell divides. When summarizing, emphasize that heat kills bacteria. Lead into the discussion of conditions needed for growth and how the conditions should be controlled.

b. Control Conditions to Prevent the Growth of Foodborne Microorganisms

(*Serving It Safe* pages 67-74) (15 minutes)

Introduce the six conditions for growth.

Option 1: Present a lesson on the six conditions necessary for growth of microorganisms. This option has the advantage of allowing the trainer to select the key content to share with the participants.

Option 2: If time is available, use this option since it involves the participants. Divide the participants into small groups. Assign each small group one of the six conditions for growth and ask them to prepare a two-minute presentation for the large group. This option has the advantage of involving participants, a technique that enhances learning. The small group should work together to select two or three important facts that describe the condition as well as one important way to control growth by controlling the condition. When called on, the small group should be ready to share their information.



As a small group makes its presentation, the trainer should add any important facts not mentioned by the group. Remind participants that they should refer to this information as needed, not try to memorize it.

Activities 2 and 3

(20 minutes)

Select an activity that meets the needs of the participants and fits the time available. Before the session, make copies of the handout if needed. Follow the directions to present the activity and discuss it after it has been completed. Begin and end every activity by relating the activity to the content that has been discussed.

- **Activity 2: Word Match—What Microorganisms Need to Grow**
- **Activity 3: Case Study—Watch Me Do It Right!**

8. Action Plan

(10-15 minutes)

Ask participants to turn to their Action Plan handout. Explain the Action Plan and relate the development of the plan for change to the participant outcomes for Chapter 3. Allow participants to work independently for about 5 minutes. Lead a discussion by calling on several participants to share answers to items 1 and 2.

Some school districts may opt to collect the completed Action Plans and use them for documentation of participation in the training session. If this is done, copies of the completed Action Plans should be returned to the participants to allow them to implement their plans. Implementation will be enhanced if the school district director or another person can use the Action Plan and work with each participant to provide follow-up after the session.

9. Summary

Bring the discussion of Chapter 3 to a close using the summary comments (*Serving It Safe* page 75). Announce the time and place for the next session.



10. Optional Assignment

Check Your Knowledge: Growth of Harmful Microorganisms

(Serving It Safe page 76)

Ask participants to complete the activity Check Your Knowledge: Growth of Harmful Microorganisms before the next session. They should refer to the content in Chapter 3 to find the answers. If this assignment is made, plan time at the beginning of the next session to review the answers. Use questions to encourage the participants to explain why a particular answer is correct.

11. Session Feedback Form

(10-15 minutes)

Distribute a Session Feedback Form to each participant. Read aloud each item, explaining the response options. Allow participants to complete the form independently. Designate a table where participants place their completed forms as they leave.



ACTIVITIES: CHAPTER 3

How to Use the Activity Section

These activities can be used for independent learning or for small group work in a training session. The format for each activity is shown below.

- Chapter Number and Activity Number
- Title
- Purpose
- Estimated Time
- Materials
- Directions
- Follow-Up Discussion
- Answers

The activities will provide opportunities for participants to apply their new knowledge and practice new skills. Using the activities as part of training sessions will enhance learning and help prepare the participants to make changes that promote food safety.

Activities for Chapter 3: Basic Facts About Microorganisms

- **Activity 1: Case Study—Food Mystery**
(*Trainer's Guide* pages 53-56)
- **Activity 2: Word Match—What Microorganisms Need to Grow**
(*Trainer's Guide* pages 57-58)
- **Activity 3: Case Study—Watch Me Do It Right!**
(*Trainer's Guide* pages 59-62)



Chapter 3, Activity 1: Case Study—Food Mystery

Purpose: To demonstrate how a food can be contaminated and then how conditions promote growth of the harmful microorganisms

Estimated Time: 25 minutes

Materials: The 14 clues for the Case Study—Food Mystery should be cut apart and placed in an envelope. Each small group should receive an envelope of clues at the beginning of the activity.

Directions:

- **Group Activity:** This activity is designed to provide a description of a situation that resulted in an outbreak of foodborne illness. To determine what caused the outbreak, participants must place 14 clues in the correct sequence of events leading up to the outbreak.
- Have enough envelopes of 14 clues for each small group. Distribute the envelopes and then provide the following directions. Explain to the groups that they can place their clues on a table to arrange them in sequence.
- Read these directions to the group: “One person in the group should remove the 14 clues from the envelope, being careful to keep them face down. Distribute the 14 clues, one by one, to each member of the group. Each member should have 2, 3, or 4 clues. When everyone has his or her clues, each person should take turns reading one clue. Then the group must work together, using all the clues to put them in order (by when they happened). When the clues have been organized, the food mystery will be solved and you will know what happened to cause the outbreak of foodborne illness.”
- As the groups are working, circulate around the room to provide coaching and feedback.

Follow-Up Discussion: When the groups have their clues in order, call on one group to begin by reading each clue in correct order. Check the correct order. After one group shares their clues 1 through 7, call on another group to complete the list. All groups should be checking their clues.



After putting the clues in order, lead a discussion about the food mystery.

- **How could the turkeys have been contaminated?**
Answer: Who and When – At the processing plant; when they were washed and prepared for roasting in the school kitchen; when Frank took them out of the oven and put them in the cooler.
- **What conditions were in place that allowed the growth of the harmful microorganisms?**
Answer:
Food – Turkey
Acidity – Some bacteria grow in the pH range found in raw poultry.
Temperature – Turkeys were not thawed and were then cooked at a low temperature. The turkeys were removed from the oven and placed in the refrigerator when the internal temperature was probably in the temperature danger zone. The partially cooled turkeys were later placed back into the oven.
Time – The turkeys were certainly in the temperature danger zone for many hours. Bacteria need time to grow and multiply.
Oxygen – Some bacteria grow in the presence of oxygen; others do not.
Moisture – Poultry is moist.
- **What should have happened on Wednesday when Betty reminded the staff that the turkeys should be cooked for Thursday and then Sara discovered that the turkeys had not been cooked?**
Answer: Sara should have told Betty, the manager, who should have changed the menu since there was no way to thaw and cook the turkeys for Thursday lunch.
- **What should have happened when Betty, the manager, realized on Wednesday that the turkeys were not done and they had been cooked from a frozen state at low temperature?**
Answer: Turkeys should have been discarded.
- **What should have happened Thursday morning when Judy realized the turkeys were not done?**
Answer: Turkeys should have been discarded.



Chapter 3, Activity 1: Case Study—Food Mystery Clues

Trainer: Copy the 2 pages of clues and cut each clue apart. Place the set of 14 clues in an envelope for each group. The clues should not be in sequential order when placed in the envelope. Solutions may vary based on individual participant opinion.

Mary Jones, a cook, left work Monday without checking her work schedule. She was supposed to place five whole turkeys in the refrigerator to thaw so they would be ready to serve for Thursday lunch.

The school foodservice manager, Betty Brown, reminded the staff at the 7:15 a.m. meeting on Wednesday that the turkeys should be cooked early that day for Thursday's special lunch.

Sara, a cook, went to the refrigerator at 7:25 a.m. to get the thawed turkeys to roast. She could not find them.

At 7:30 a.m., Sara asked Betty, the manager, if the turkeys had been thawed.

Betty talked to Judy, the regular meat cook, about how to thaw the turkeys that needed to be cooked for Thursday's special lunch.

Judy suggested that frozen turkeys could be cooked at a low temperature for a longer period of time. She helped Sara put the frozen turkeys on to cook.

At 2:25 p.m. on Wednesday, Betty checked on the turkeys and realized they were not done.



Betty had to leave immediately on Wednesday to attend a manager's meeting at the central office. She asked Judy to stay a little later and put the turkeys in the refrigerator when they were done.

Judy agreed to stay, but then realized that she had to leave before 3:00 p.m. for her dentist appointment. She found Frank, the school janitor, and asked him to take the turkeys out of the oven and put them in the refrigerator before he left.

When Frank finished cleaning the restrooms near the cafeteria about 3:30 p.m., he went to the kitchen and took the turkeys from the oven and placed them in the refrigerator.

Thursday morning, Judy's first task was to take the turkey meat off the bone and slice it for Thursday lunch. With the first turkey, she realized it was not completely cooked. She knew if one turkey was not completely cooked, none of them were.

Judy decided to place the turkeys back into the oven for about 2 hours.

At the end of that time, Judy took the turkeys from the oven and sliced the meat. The sliced turkey was served at 11:00 a.m. to 400 elementary school children.

After school, the principal's 10-year-old son began getting sick. By the next morning, many children who ate lunch at school were sick with nausea, vomiting, and diarrhea. The principal asked Betty to come to her office to talk about what could have happened.



Chapter 3, Activity 2: Word Match—What Microorganisms Need to Grow

Purpose: To provide participants an opportunity to check their learning

Estimated Time: 20 minutes

Materials: Each participant should have one copy of the Word Match handout.

Directions:

- **Independent Activity:** Explain the directions and complete item 1 together to model the activity. Then allow participants to work independently. When everyone has completed the activity, discuss the answers.

Follow-Up Discussion: Call on various participants to share their answers. Relate answers to information learned in Chapter 3. Emphasize that different microorganisms need different conditions to grow and multiply.

Answers:

- A. 1
- B. 3
- C. 2
- D. 6
- E. 3
- F. 4
- G. 5
- H. 6
- I. 2

WORD MATCH—WHAT MICROORGANISMS NEED TO GROW

PARTICIPANT HANDOUT



Directions: Write in the numbers of the correct Conditions for Growth of Microorganisms beside the letter describing that condition. The numbered items can be used more than one time.

Conditions for Growth of Microorganisms

- | | | |
|----------------|-------|---|
| 1. Food | _____ | A. All animal products and some fruits and vegetables |
| 2. Acidity | _____ | B. Bacterial spores can survive very high _____ or very low _____ and grow again when the conditions are right. |
| 3. Temperature | _____ | C. pH between 4.6 and 7.0 |
| 4. Time | _____ | D. Low levels make foods resistant to bacteria. |
| 5. Oxygen | _____ | E. Only way to check is with a thermometer |
| 6. Moisture | _____ | F. To control bacterial growth, control _____ and temperature. |
| | _____ | G. Some bacteria can grow only with _____, some can grow only without _____, and some can grow with or without _____. |
| | _____ | H. Sugar products, cereal products, dried fruits, jams and jellies do not have lots of _____. |
| | _____ | I. A meat marinade with vinegar or fruit juice has increased _____. |



Chapter 3, Activity 3: Case Study—Watch Me Do It Right!

Purpose: To provide practice in how to control the growth of harmful microorganisms

Estimated Time: 20 minutes

Materials: Each participant should have one copy of the case study.

Directions:

- Provide a copy of the case study to each participant.
- Read the case study aloud and explain the directions. Begin by modeling the activity as a large group. Match one correct procedure listed in the case study and the condition needed for growth of microorganisms that is controlled by using the correct procedure.
- Allow the participants to work independently, in pairs, or in small groups to match the correct procedures being used to control the conditions needed for growth of microorganisms.
- Remind participants that controlling the growth of microorganisms can be done by controlling the availability of food source, acidity, temperature, time, oxygen, and moisture.

Follow-Up Discussion: Call on various participants to share a correct procedure and the condition it controlled.

Suggested Answers:

Possible Condition(s)	Procedure from the Case Study
Food	Later that morning, Gene set up all three service lines for lunch.
Temperature	He checked to see that the heating units were working properly.
Acidity	One of the ingredients in the marinade was white vinegar.
Temperature	The internal temperature of cooked foods was checked and recorded.
Temperature	Foods that were to be held for service were placed in a

	hot holding cabinet with the temperature set to 135 °F.
Temperature; Time	Mary was assigned to check temperatures every 30 minutes for foods being held in cabinets and on the service line.
Temperature; Time	Any food that was not at or above 135 °F was to be pulled and reheated to 165 °F for 15 seconds.
Temperature; Time	Spaghetti sauce was left over so it was chilled in shallow pans using the correct cooling procedure, then tightly covered, labeled with name and date, and stored in the freezer.
Temperature; Time	The delivery was checked and then stored immediately.



CASE STUDY—WATCH ME DO IT RIGHT!

PARTICIPANT HANDOUT



Directions: Read the case study and identify all the ways that the school nutrition staff has controlled conditions to prevent the growth of microorganisms. Complete the matching activity to identify the conditions to be controlled from the list provided. There may be more than one condition for each sentence.

Case Study

Veronica prepares, serves, and cashiers at breakfast in a small elementary school. Students go through the line and basically serve themselves. This morning, the ham biscuits were on the baking pan brought to the serving line. They were pre-wrapped, and the children picked them up as they passed down the line. Veronica had finished cashiering and was counting money when some students arriving on a late bus came for their breakfast. There were no wrapped ham biscuits left, but Veronica quickly washed her hands, put on gloves, and served unwrapped ham biscuits from the warmer.

After breakfast, Gene was assigned to clean the service line, which he did, then sanitized it with a bleach solution. Later that morning, Gene set up all three service lines for lunch.

Each of the cooks used recipes to prepare the assigned menu items. One of the cooks was assigned to prepare skinless chicken breasts to marinate overnight for Chicken Fajitas (USDA Recipe D-40) to be served the next day. One of the ingredients in the marinade was white vinegar.

The internal temperature of cooked foods was checked and recorded. Foods that were to be held for service were placed in a hot holding cabinet with the temperature set to 135 °F. Mary was assigned to check temperatures every 30 minutes for foods being held in holding cabinets and on the service line. Any food that was not at or above 135 °F was to be pulled and reheated to 165 °F for 15 seconds.

Spaghetti sauce was left over so it was chilled in shallow pans using the correct cooling procedure, then tightly covered, labeled with name and date, and stored in the freezer.

Right after lunch, a delivery was made. The delivery was checked and then stored immediately.

Conditions Requiring Control to Prevent the Growth of Microorganisms

Food
 Acidity
 Temperature
 Time
 Oxygen
 Moisture

Possible Condition(s)	Procedure from the Case Study
	Later that morning, Gene set up all three service lines for lunch.
	He checked to see that the heating units were working properly.
	One of the ingredients in the marinade was white vinegar.
	The internal temperature of cooked foods was checked and recorded.
	Foods that were to be held for service were placed in a hot holding cabinet with the temperature set to 135 °F.
	Mary was assigned to check temperatures every 30 minutes for foods being held in cabinets and on the service line.
	Any food that was not at or above 135 °F was to be pulled and reheated to 165 °F for 15 seconds.
	Spaghetti sauce was left over so it was chilled in shallow pans using the correct cooling procedure, then tightly covered, labeled with name and date, and stored in the freezer.
	The delivery was checked and then stored immediately.

ACTION PLAN: CHAPTER 3

Instruction Sheet

Purpose: To provide an opportunity at the end of Chapter 3 for the participants to describe how they will use what has been learned

Estimated Time: 10-15 minutes

Materials: Each participant should have a copy of the Action Plan.

Directions:

- **Independent Activity:** This activity should be completed at the end of the discussion about Chapter 3.
- Explain the directions for completing the Action Plan. Allow participants to work independently to complete each item on their individual Action Plan.

Follow-Up Discussion: When everyone has completed their form, call on several participants to share one plan for change.



CHAPTER 3: BASIC FACTS ABOUT MICROORGANISMS

ACTION PLAN

PARTICIPANT HANDOUT



You have completed Chapter 3 and learned about major foodborne illnesses caused by bacteria, viruses, fungi, and parasites. You have also been introduced to the six conditions to prevent the growth of harmful microorganisms in your foodservice operation.

You should now be able to

- identify foods on the menu that need improved handling in order to prevent foodborne illness and
- describe changes to be made to improve control of conditions for microorganism growth.

Directions: Answer the questions below to describe your plans to prevent foodborne illness.

1. Identify the foods on your menu that you think need improved handling in order to prevent foodborne illness. For example, you may need to be sure to wash fresh produce more carefully whether or not it will be peeled or cooked.

2. List below changes that need to be made to improve control of the conditions for growth of microorganisms. Controlling the conditions of food, temperature, and time will be your highest priorities.

	Change to be made?	Who is responsible?	When?
Food			
Time			
Temperature			

Name: _____ Date: _____

SESSION 2: FEEDBACK FORM

PARTICIPANT HANDOUT



Date: _____ School: _____

Part 1: Please respond to items 1-5 below. Circle the number to indicate your level of agreement with each item. If you **Completely Disagree**, circle 1, on the right. If you **Completely Agree**, circle 4, on the left. If your opinion is somewhere in between, circle 2 or 3.

	Completely Agree	Agree	Disagree	Completely Disagree
1. What I learned will be useful to me.	4	3	2	1
2. The trainer presented the material in a way I could understand.	4	3	2	1
3. The practice activities helped me to understand the material.	4	3	2	1
4. I have completed the Action Plan for the lesson(s) and will use it to make changes in my foodservice facility.	4	3	2	1
5. I learned some ways to improve food safety in my facility.	4	3	2	1

SESSION 2: FEEDBACK FORM (CONTINUED)

Part 2: Please answer the following questions.

1. What information discussed in this session will be most useful in your own foodservice facility?

2. Are there food safety topics you would like to know more about? Please describe in the space below.

After completing this form, place it on the table designated by the trainer.

Thank you for participating in this training session.

SESSION 3: OVERVIEW

Objectives

Following the lesson, participants will be able to describe one or more changes to

- promote food safety through improved personal hygiene and employees' work attire in the foodservice facility,
- promote food safety through improved cleaning procedures and pest control,
- improve procedures for cleaning and sanitizing smallware, and
- improve procedures for cleaning and sanitizing large equipment.

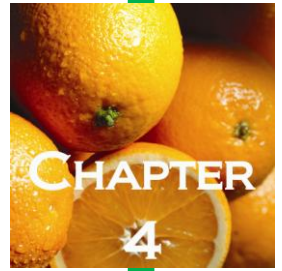
Materials Needed For the Trainer

- Serving It Safe* manual and *Serving It Safe Trainer's Guide*
- Flip chart, easel, and markers; chalkboard and chalk; or whiteboard and markers
- Materials required for selected activities

Materials Needed For Each Participant

- Place cards with participants' names on them to assign seating
- A copy of each activity handout
- Materials required for selected activities
- A copy of the Action Plan handout for Chapter 4
- A copy of the Session Feedback Form
- Pen or pencil

Place a set of the materials at each assigned place before the session begins.



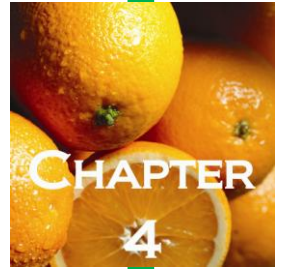
Time Schedule: Session 3

2 hours and 15 minutes



Section Title	<i>Serving It Safe</i> Manual Page(s)	Time Estimate
Session 3 Introduction		10 minutes
Chapter 4	77-99	
How can food safety be promoted through personal hygiene and work attire?	79-82	50 minutes
Comfort Break		Trainer's Decision
How can a food-safe facility be operated?	83-89	35 minutes
How should smallware be cleaned and sanitized?	90-96	10-15 minutes
How should large equipment be cleaned and sanitized?	96-97	5 minutes
Who is responsible for food safety?	98	5 minutes
Action Plan: Chapter 4	<i>(Trainer's Guide</i> page 84-85)	10-15 minutes
Session 3: Feedback Form	<i>(Trainer's Guide</i> pages 86-87)	10-15 minutes

When there are optional activities available, the estimated time for using those activities is not included in the time estimate for the session.



LESSON PLAN: CHAPTER 4

Session 3 Introduction

10 Minutes

1. Introduce yourself and offer welcoming remarks. Complete any administrative requirements, such as roll call.
2. If an assignment was made in Session 2, follow up with a discussion of the assignment before beginning Chapter 4.
3. To begin the session, distribute a copy of the Action Plan handout for Chapter 4 to each participant. The Action Plans will be completed at the end of the discussion and activities.
4. Explain any logistical information needed by the participants.

Chapter 4: A Clean and Sanitary Foodservice Facility

Total Time for Chapter 4 – 2 Hours and 5 Minutes



1. **Introduce** Chapter 4 by reviewing the objectives. Participants will describe one or more changes to
 - promote food safety through improved personal hygiene and employees' work attire in the foodservice facility,
 - promote food safety through improved cleaning procedures and pest control,
 - improve procedures for cleaning and sanitizing smallware, and
 - improve procedures for cleaning and sanitizing large equipment.

2. **How can food safety be promoted through personal hygiene and work attire?**

(*Serving It Safe* pages 79-82) (50 minutes)

Introduce the topic by explaining that food safety is the responsibility of everyone who works in foodservice. Call on several participants to describe some aspect of their job that has an impact on food safety.

 - a. **Know Why Personal Hygiene and Work Attire Are Important**

(*Serving It Safe* pages 79-80) (5 minutes)

In your own words, present the content on pages 79-80 about how a foodservice employee can contaminate foods with hands.

 - b. **Use Guidelines for Good Personal Hygiene**

(*Serving It Safe* pages 80-81) (5 minutes)

Ask questions to involve participants in developing their own guidelines for good personal hygiene. As participants make suggestions, write them on a flipchart or whiteboard. If any of the guidelines shown on page 80 are not suggested, add them to the list. Add to the list any guidelines unique to the district or individual school sites.

**Activity 1: Are your hands really clean?**

(30 minutes)

Using this activity is an effective way to emphasize the importance of hand washing. Assemble the materials needed before the session. You may want to review best practices for handwashing (when and how) in *Serving It Safe* Chapter 2, pages 30-31.

c. Dress for Food Safety Success

(*Serving It Safe* page 81) (5 minutes)

Continue using the questioning technique to have the participants suggest guidelines for work attire. As participants make suggestions, write them on a flipchart or whiteboard. If any of the guidelines shown on page 81 are not suggested, add them to the list. Add to the list any guidelines unique to the school district or individual school sites.

d. Use Common Sense as a Guide When Working With Food

(*Serving It Safe* page 82) (5 minutes)

Review the seven items on page 82. If participants need training in correct tasting procedure, explain the procedure and have them demonstrate it. As participants make suggestions, write them on a flipchart or whiteboard. If any of the guidelines shown on page 82 are not suggested, add them to the list. Add to the list any guidelines unique to the district or individual school sites.

3. How can a food-safe facility be operated?

(*Serving It Safe* pages 83-89) (35 minutes)

Introduce the topic by explaining that the term “food-safe” is used in *Serving It Safe* to mean a facility that is clean and in good repair.

a. Know the Characteristics of a Food-Safe Facility

(*Serving It Safe* pages 83-84) (5 minutes)

In your own words, present the content on pages 83-84. Add other characteristics that are specific to the district or individual school sites.

**Activity 2: Food-Safe Facility Checklist**

(10-20 minutes)

Distribute a copy of the Food-Safe Facility Checklist handout. Read each item aloud, allowing about 10 seconds for participants to mark their answer. After everyone has completed the checklist, call on several participants to share a change that should be made to make their facility food-safe.

Option: To reduce time in the session, the Food-Safe Facility Checklist can also be used after the session for an on-site inspection of each participant's facility. If this is done, plan time in the next session for participants to share and discuss their findings.

b. Maintain Clean Floors, Walls, and Ceilings; Maintain a Clean and Sanitary Service Line and Serving Stations; Maintain Good Ventilation; Maintain Clean Employee Restrooms; Maintain Clean and Neat Trash Collection Areas

(*Serving It Safe* pages 84-87) (15 minutes)

Divide the participants into five small groups. Assign each small group one of the sections from *Serving It Safe* listed above that addresses having a food-safe facility.

- Each small group should prepare a two-minute presentation of important points from *Serving It Safe*. Encourage each person in the group to take part in the presentation.
- In addition to presenting a summary from *Serving It Safe*, each small group should select one improvement needed for their area and be ready to share it with the large group.
- Allow the small groups about 5 minutes to work together to prepare their presentation. While they are working, circulate around the room to provide coaching as needed.
- Each small group should make their presentation to the large group. Ask questions to involve everyone.



c. Maintain an Effective Pest Control Program

(*Serving It Safe* pages 87-89) (5 minutes)

Present a summary of the content. Emphasize any additional requirements or procedures for the district or individual school sites.

Optional Activity 3: Case Study—Pest Problems at Red Oak High School

(20 minutes)

Follow the directions to facilitate the activity.

4. How should smallware be cleaned and sanitized?

(*Serving It Safe* pages 90-96) (10-15 minutes)

Introduce the topic by explaining that the term “smallware” is used in *Serving It Safe* as a collective term for dishes, flatware, preparation and serving utensils, measuring devices, cooking pots and pans, and small equipment that can be moved to the three compartment sink or mechanical dishwasher for cleaning and sanitizing. Explain the terms “clean” and “sanitize.”

**a. Select from Two Methods of Sanitizing—
Chemical or Heat**

(*Serving It Safe* pages 91-93)

Ask questions to allow participants to share what they know about the correct method of chemical sanitizing and heat sanitizing. Continue asking questions to have participants review the correct way to mix and use the chemical sanitizer in their facility. Explain or review the correct use of a sanitizer kit. To ensure that the kit is used correctly, provide a demonstration or ask an experienced foodservice employee to demonstrate the correct use.

b. Sanitize Smallware in a Three-Compartment Sink

(*Serving It Safe* pages 93-94)

A discussion of sanitizing smallware in a three-compartment sink will be a review for most participants. More time should be spent on this topic if participants are inexperienced or a new method is being introduced. Describe requirements of the local public health department. Emphasize the importance of reading and following manufacturer's directions for using a



chemical and also for following guidelines in the Material Safety Data Sheet (MSDS).

c. Sanitize Smallware in a Mechanical Dishwasher

(*Serving It Safe* pages 95-96)

A discussion of sanitizing smallware in a dishwasher will be a review for most participants. More time should be spent on this topic if participants are inexperienced or a new method is being introduced. Describe requirements of the state and local public health department. Explain how to check dishwasher temperatures.

5. How should large equipment be cleaned and sanitized?

(*Serving It Safe* pages 96-97) (5 minutes)

Introduce the topic and review the related content.

a. Use the Chemical Method to Sanitize Equipment

(*Serving It Safe* page 96)

Provide a summary of the topic.

b. Sanitize In-Place Equipment

(*Serving It Safe* page 97)

Provide a summary of the topic and describe the steps to sanitize in-place equipment.

6. Who is responsible for food safety?

(*Serving It Safe* page 98) (5 minutes)

Review the responsibilities of managers and employees on page 98. If there are additional responsibilities for the district or individual school sites, explain them. Use a handout if needed.

7. Action Plan

(10-15 minutes)

Ask participants to turn to their Action Plan handout. Explain the Action Plan and relate the development of the plan for change to the participant outcomes for Chapter 4. Allow participants to work independently for about 5 minutes. Lead a discussion by calling on several participants to share changes they will make.

Some school districts may opt to collect the completed Action Plans and use them for documentation of participation in the training

session. If this is done, copies of the completed Action Plans should be returned to the participants to allow them to implement their plans. Implementation will be enhanced if the school district director or another person can use the Action Plan and work with each participant to provide follow-up after the session.

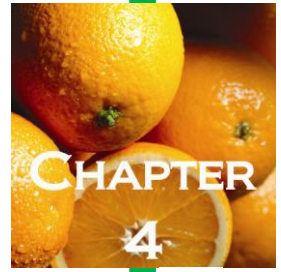
8. Summary

Bring the discussion of Chapter 4 to a close using the summary comments (*Serving It Safe* page 99). Announce the time and place for the next session.

9. Session Feedback Form

(10-15 minutes)

Distribute a Session Feedback Form to each participant. Read aloud each item, explaining the response options. Allow participants to complete the form independently. Designate a table where participants place their completed forms as they leave.





ACTIVITIES: CHAPTER 4

How to Use the Activity Section

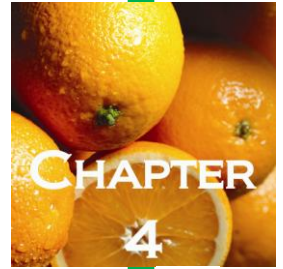
These activities can be used for independent learning or for small group work in a training session. The format for each activity is shown below.

- Chapter Number and Activity Number
- Title
- Purpose
- Estimated Time
- Materials
- Directions
- Follow-Up Discussion
- Answers

The activities will provide opportunities for participants to apply what they've learned and practice new skills. Using the activities as part of training sessions will enhance learning and help prepare the participants to make changes that promote food safety.

Activities for Chapter 4: A Clean and Sanitary Foodservice Facility

- **Activity 1: Are your hands really clean?**
(*Trainer's Guide* pages 77-78)
- **Activity 2: Food-Safe Facility Checklist**
(*Trainer's Guide* pages 79-80)
- **Activity 3: Case Study—Pest Problems at Red Oak High School**
(*Trainer's Guide* pages 81-83)



Chapter 4, Activity 1: Are your hands really clean?

Note to the Trainer: Correct hand washing procedures were presented in detail in *Serving It Safe* Chapter 2, pages 30-31. This activity can be used in training sessions for Chapter 2 or Chapter 4.

Purpose: To demonstrate the importance of the correct hand washing procedure

Estimated Time: 30 minutes for 20 participants

Materials:

- A substance that can be used to simulate microorganisms on the hands:
 - **Option 1:** A black light and fluorescent substance (oils, gels, and powders that reflect in black light). One source for a fluorescent substance: Glo-Germ Company, P.O. Box 189, Moab, Utah 84532. Telephone: 800-842-6622. Web site: <http://www.glogerm.com/>.
 - **Option 2:** Colored glitter

Directions:

- **Group Activity:** Using the materials and procedures described below, show participants the invisible microorganisms that may be hiding on their hands.
 - **Option 1:** Use the fluorescent substance and a black light.
 1. Direct participants to dip their hands in the fluorescent substance.
 2. Tell participants to wash their hands.
 3. Have participants hold their hands under the black light.
 4. Explain correct hand washing procedures using *Serving It Safe* pages 30-31.
 5. Have participants wash their hands again using the correct hand washing procedure.
 6. Have participants hold their hands under the black light once again.



- **Option 2:** Using colored glitter:
 1. Direct half the participants to dip their right hands in glitter.
 2. A participant with dipped hands should shake hands with a participant with undipped hands.
 3. Direct participants who did not dip their right hands to display the colored glitter that was transferred during the handshake.
 4. Discuss the importance of handwashing and explain correct hand washing procedures using the steps in *Serving It Safe* pages 30-31.
 5. Have participants wash their hands using the correct hand washing procedure.
 6. Have participants examine the amount of glitter left on their hands. Remind participants that microorganisms cannot be seen with the naked eye but are located in many places in a foodservice operation.

Follow-Up Discussion:

Emphasize the correct procedure for washing hands and the when, why, and how of correct hand washing.



Chapter 4, Activity 2: Food-Safe Facility Checklist

NOTE: In order for participants to do a kitchen inspection as part of a training session, the session will need to be held in a school when the kitchen is available for inspection. Note that the Food-Safe Facility Checklist is based on the information in *Serving It Safe* pages 83-89.

Purpose: To provide participants an opportunity to assess whether they have a food-safe facility

Estimated Time: A facility inspection will take about 20 minutes, including some discussion afterwards. If participants review their own facilities from memory, the time would be shortened to about 10 minutes, then a short discussion.

Materials: Each participant should have one copy of the Food-Safe Facility Checklist.

Directions:

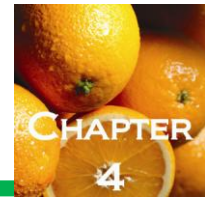
- Distribute the Food-Safe Facility Checklist and have participants work together in pairs to inspect the kitchen.
- If the training session site does not lend itself to a kitchen inspection on site, have participants use knowledge of their own facilities to complete the checklist from memory.

Follow-Up Discussion:

Lead a discussion of what problems participants identified and how they can be corrected.

FOOD-SAFE FACILITY CHECKLIST

PARTICIPANT HANDOUT



	Yes	No	Work Needed
1. The kitchen is designed for easy cleaning and maintenance.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. The floors, walls, and ceilings are free of dirt, litter, and moisture.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. The service line and serving stations are clean and neat.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. The exhaust fans and hoods are clean and operating properly.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. All types of storage areas—the dry storage room, the refrigerators, and the freezers—are in excellent condition. There is no damage or spoilage, no broken or torn packages, and no bulging or leaking cans. Floors are clean, dry, and uncluttered.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Cleaning supplies and chemicals are properly labeled and are stored away from food supply areas. Measuring utensils used for chemicals are stored with the chemicals and are never used with or near food.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Restrooms are convenient, sanitary, adequately stocked with soap and paper towels, and have warm, running water.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Garbage is kept away from food preparation areas.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Garbage containers are leak-proof, waterproof, pest-proof, durable, easy to clean and sanitize, and have tight-fitting lids.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Spills are cleaned immediately.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Garbage is disposed of properly and promptly.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. There is no evidence of infestation from bugs or other pests.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Procedures are written and available for all employees to clean and maintain			
• floors, walls, and ceilings;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• service line and dispensers;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• ventilation;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• restrooms,	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• trash collection areas; and	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• an effective pest control program.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Chapter 4, Activity 3: Case Study—Pest Problems at Red Oak High School

Purpose: To provide practice using knowledge about how to have an effective pest control program

Estimated Time: 20 minutes

Materials: Each participant should have a copy of the handout.

Directions:

- **Group Activity:** Use the activity after the section on pest control has been discussed.
- Explain the directions. Let participants work in pairs or small groups to decide on changes that should be made to have a more effective pest control program.

Follow-Up Discussion: After participants have made their lists, lead a discussion. Call on various participants to share their ideas.

Suggested Answers:

1. **Observation:** Fan at the back door does not work.
Change: *Have it repaired. In the meantime, keep the door closed.*
2. **Observation:** Unscreened back door does not fit securely when closed.
Change: *Have maintenance check the door and make it more secure. Flies and other pests can enter in very small spaces.*
3. **Observation:** One bag of rice in the storeroom is broken at the bottom and has spilled.
Change: *Clean up the rice, discard the bag since a rat or mouse may have chewed it. Store all food and supplies 6-8 inches off the floor on pallets or shelves.*
4. **Observation:** Cases of cans are stored in cardboard cartons.
Change: *Remove the cans from the cases and record the arrival date on the cans. If necessary, keep a portion of the case for reference numbers.*
5. **Observation:** Pipes from the steam-jacketed kettle have space around them.
Change: *Have maintenance fill openings around pipes to prevent entry by pests.*





- 6. Observation:** Garbage cans are not covered at any time of the day.
Change: *Follow state and local public health department guidelines; keep garbage cans covered as much as possible.*
- 7. Observation:** The loading dock is clean in the middle but the sides are dirty.
Change: *Have the loading dock completely cleaned, and then begin a routine cleaning program of that area.*
- 8. Observation:** Bins of flour and sugar were left half-full over the summer.
Change: *Bins should have been emptied, cleaned, and sanitized for the summer. Food left in the bins should be discarded and the bins cleaned and sanitized.*
- 9. Observation:** The grease trap had not been cleaned and the three-compartment sink drain had overflowed. The overflow had dried during the summer, and an unpleasant odor was obvious.
Change: *All grease traps should be cleaned on a regular basis to prevent grease build up.*
- 10. Observation:** Material Safety Data Sheets (MSDS) were not available for the cleaning chemicals used in the kitchen.
Change: *Jim should contact the employee who purchases the chemicals and obtain a copy of the MSDS for each chemical used. All employees should be properly taught about the procedure for using chemicals and where the MSDS are located.*

CASE STUDY—PEST PROBLEMS AT RED OAK HIGH SCHOOL

PARTICIPANT HANDOUT



Jim began the new school year at Red Oak High School after several years as manager at another school in the district. The week before school started, he noticed evidence of pests, including cockroaches and flies. Although the school had been closed for the summer, Jim found out from the principal that the pest control company serviced the school regularly. Jim decided to make some changes to help prevent infestations. He first walked around the kitchen to observe where and why pests were in the kitchen. His observations are listed below.

Directions: In the right column, write the change that should be made in order to have a more effective pest control program. Refer to *Serving It Safe* pages 87-89, *Maintain an Effective Pest Control Program*, for more information.

Jim's Observations	Change to Be Made
1. Fan at the back door does not work.	
2. Unscreened back door does not fit securely when closed.	
3. One bag of rice in the storeroom is broken at the bottom and has spilled.	
4. Cases of cans are stored in cardboard cartons.	
5. Pipes from steam-jacketed kettle have space around them.	
6. Garbage cans are not covered at any time of the day.	
7. The loading dock is clean in the middle but the sides are dirty.	
8. Bins of flour and sugar were left half-full over the summer.	
9. The grease trap had not been cleaned and the three-compartment sink drain had overflowed. The overflow had dried during the summer, and an unpleasant odor was obvious.	
10. Material Safety Data Sheets (MSDS) were not available for the cleaning chemicals used in the kitchen.	

ACTION PLAN: CHAPTER 4

Instruction Sheet

Purpose: To provide an opportunity at the end of Chapter 4 for the participants to describe how they will use what has been learned

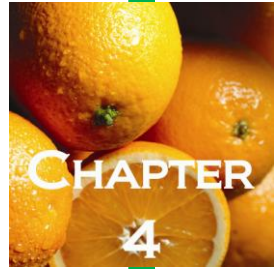
Estimated Time: 10-15 minutes

Materials: Each participant should have a copy of the Action Plan.

Directions:

- **Independent Activity:** This activity should be completed at the end of the discussion about Chapter 4.
- Explain the directions for completing the Action Plan. Allow participants to work independently to complete each item on their individual Action Plan.

Follow-Up Discussion: When everyone has completed their form, call on several participants to share one plan for change.



CHAPTER 4: A CLEAN AND SANITARY FOODSERVICE FACILITY ACTION PLAN

PARTICIPANT HANDOUT



You have completed Chapter 4 and learned more about how to operate a food-safe facility and how to clean and sanitize smallware and large equipment.

You should now be able to describe one or more changes to

- promote food safety through improved personal hygiene and employees' work attire in the foodservice facility,
- promote food safety through improved cleaning procedures and pest control,
- improve procedures for cleaning and sanitizing smallware, and
- improve procedures for cleaning and sanitizing large equipment.

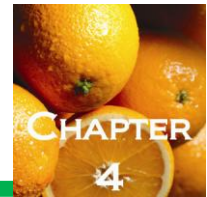
Directions: For each category below, describe plans for changes to improve your foodservice facility.

	Change to be made?	Who is responsible?	When?
Personal hygiene and work attire			
Facility (floors, walls, ceiling, service line, ventilation, restrooms, garbage collection areas, pest control)			
Cleaning and sanitizing smallware			
Cleaning and sanitizing large equipment			

Name: _____ Date: _____

SESSION 3: FEEDBACK FORM

PARTICIPANT HANDOUT



Date: _____ School: _____

Part 1: Please respond to items 1-5 below. Circle the number to indicate your level of agreement with each item. If you **Completely Disagree**, circle 1, on the right. If you **Completely Agree**, circle 4, on the left. If your opinion is somewhere in between, circle 2 or 3.

	Completely Agree	Agree	Disagree	Completely Disagree
1. What I learned will be useful to me.	4	3	2	1
2. The trainer presented the material in a way I could understand.	4	3	2	1
3. The practice activities helped me to understand the material.	4	3	2	1
4. I have completed the Action Plan for the lesson(s) and will use it to make changes in my foodservice facility.	4	3	2	1
5. I learned some ways to improve food safety in my facility.	4	3	2	1

SESSION 3: FEEDBACK FORM (CONTINUED)

Part 2: Please answer the following questions.

1. What information discussed in this session will be most useful in your own foodservice facility?

2. Are there food safety topics you would like to know more about? Please describe in the space below.

After completing this form, place it on the table designated by the trainer.

Thank you for participating in this training session.



SESSION 4: OVERVIEW

Objective

Following the lesson, participants will be able to describe one or more changes to be made to prevent foodborne illness at each step of the foodservice process.

Materials Needed For the Trainer

- Serving It Safe* manual and *Serving It Safe Trainer's Guide*
- Flip chart, easel, and markers; chalkboard and chalk; or whiteboard and markers
- Materials required for selected activities

Materials Needed For Each Participant

- Place cards with participants' names on them to assign seating
- A copy of each activity handout
- Materials required for selected activities
- A copy of the Action Plan handout for Chapter 5
- A copy of the Session Feedback Form
- Pen or pencil

Place a set of the materials at each assigned place before the session begins.

Time Schedule: Session 4

2 hours and 35 minutes



SESSION 4

Section Title	<i>Serving It Safe</i> Manual Page(s)	Time Estimate
Session 4 Introduction		10 minutes
Chapter 5	100-136	
How can foodborne illness be prevented during the Eight Steps of the Foodservice Process?	101-129	
Introduction	101	5 minutes
Step 1: Purchasing	102-103	5 minutes
Step 2: Receiving	103-111	25 minutes
Step 3: Storing	112-116	30 minutes
Comfort Break		Trainer's Decision
Step 4: Preparing	116-120	10 minutes
Step 5: Cooking	121-122	10 minutes
Step 6: Holding and Serving	123-127	15 minutes
Step 7: Cooling	127-128	20 minutes
Step 8: Reheating	129	5 minutes
Action Plan: Chapter 5	<i>(Trainer's Guide</i> pages 107-108)	10-15 minutes
Session 4: Feedback Form	<i>(Trainer's Guide</i> page 109-110)	10-15 minutes

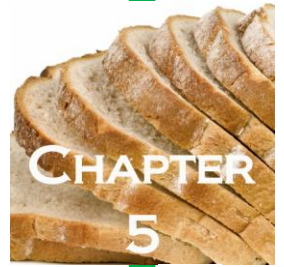
When there are optional activities available, the estimated time for using those activities is not included in the time estimate for the session.

LESSON PLAN: CHAPTER 5

Session 4 Introduction

10 Minutes

1. Introduce yourself and offer welcoming remarks. Complete any administrative requirements, such as roll call.
2. If an assignment was made in Session 3, follow up with a discussion of the assignment before beginning Chapter 5.
3. To begin the session, distribute a copy of the Action Plan handout for Chapter 5 to each participant. The Action Plans will be completed at the end of the discussion and activities.
4. Explain any logistical information needed by the participants.





Chapter 5: A Process for Preventing Foodborne Illness

Total Time for Chapter 5 – 2 Hours and 25 Minutes

- 1. Introduce** Chapter 5 by reviewing the participant objective.
Participants will describe one or more changes to be made to prevent foodborne illness at each step of the foodservice process.
- 2. How can foodborne illness be prevented in the Eight Steps of the Foodservice Process?**
(*Serving It Safe* pages 101-129)
Introduce the process for preventing foodborne illness and call attention to the eight steps (*Serving It Safe* page 101) (5 minutes).

Step 1: Purchasing

(*Serving It Safe* pages 102-103) (5 minutes)

Present a summary of this step. Provide additional information unique to the district or individual school sites.

Step 2: Receiving

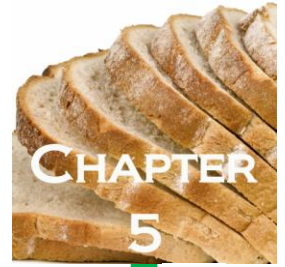
(*Serving It Safe* pages 103-111) (25 minutes)

Summarize the content, adding details that are unique to the district or individual school sites. Call attention to the details on how to evaluate various foods during the receiving process, but do not discuss every item. The following activity was designed to familiarize the participants with the evaluation criteria for various foods (*Serving It Safe* pages 106-111). (5 minutes)

Activity 1: Receiving Decisions

(20 minutes)

Use this activity with the large group by reading each receiving situation aloud and allowing participants to make their decisions. The participants should refer to *Serving It Safe*, pages 106-111, to make their decisions on whether to accept or reject the product. Ask participants to write the *Serving It Safe* page number beside their answer.



Optional Activities

(20-30 minutes)

Two additional activities are provided for use with the content on receiving. Before the session, make copies of the handout or assemble other materials needed. Follow the directions to present the activity and discuss it after it has been completed. Begin and end every activity by relating the activity to the content that has been discussed.

- **Activity 2: Checking Temperatures of Specially Packaged Foods**
- **Activity 3: Case Study—Safe In, Safe Out**

Step 3: Storing

(*Serving It Safe* pages 112-116) (30 minutes)

Introduce this step of the process and describe the four areas of storage. Emphasize key points that meet the needs of the participants. (10 minutes)

Optional Technique for Presenting Content

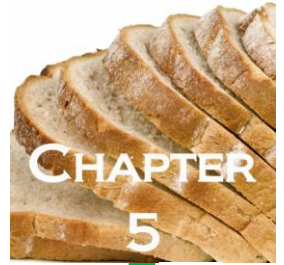
(*Serving It Safe* pages 112-116) (20 minutes)

Divide the participants into four equal small groups and assign each small group one of the four areas of storage.

- **Group 1:** Use Dry Storage Safely (*Serving It Safe* pages 112-113)
- **Group 2:** Use Refrigerated Storage Safely (*Serving It Safe* pages 113-115)
- **Group 3:** Use Deep Chilling Safely (*Serving It Safe* page 115)
- **Group 4:** Use Frozen Storage Safely (*Serving It Safe* pages 115-116)

The small groups should work together for a maximum of 5 minutes to go over the information in *Serving It Safe* and get ready to present a short summary of the content. In the directions to the small groups, explain that they should

- select content that is most applicable to their foodservice facility,
- be prepared to give at least one example of how they can use these guidelines in their foodservice facility, and



- plan for each member to participate in a two-minute presentation of content about his or her storage area.

Circulate around the room as the small groups are working to provide coaching. As the groups are making their presentations, fill in key points they may have overlooked.

Step 4: Preparing

(*Serving It Safe* pages 116-120) (10 minutes)

Use the introductory content at the bottom of page 116 to introduce the food safety guidelines for preparing. Use a short lesson to present a summary of the content for this step. Ask questions to involve participants and allow them to share their expertise. Emphasize topics that are particularly relevant to the participants. For example, if pan-frying food for batch cooking is a common practice, spend more time on the topic, Follow Food Safety Guidelines for Panned Foods to be Cooked Later (*Serving It Safe* pages 119-120).

Step 5: Cooking

(*Serving It Safe* pages 121-122) (10 minutes)

Present a summary of the content in this step. Point out any differences of state and local public health requirements on the minimum safe internal cooking temperatures. These temperatures are consistent with the FDA *Food Code*.

Step 6: Holding and Serving

(*Serving It Safe* pages 123-127) (15 minutes)

Provide a summary of Follow Food Safety Guidelines for Holding and Serving (*Serving It Safe* pages 123-124). Involve the participants in presenting the remaining content in this step using the following technique:

- Divide the participants into three (or six) equal groups, depending on the size of the whole group. Allow the small groups to present a summary of the three parts of this step. The summary should point out two or three key points.
- If there are only three groups, one group will summarize their assigned part (see below). If there are six groups, divide each assigned part.



Encourage the small groups to stand while having their discussion and deciding how and what they will present.

- Allow the small groups to work about 5 minutes, and then call on each group.
- Assignments for three groups (if six groups, then divide each part of the assigned content into two parts):
 - **Group 1:** Follow Food Safety Guidelines for Employees on the Service Line (*Serving It Safe* pages 124-125)
 - **Group 2:** Follow Food Safety Guidelines for Sanitary Self-Service (*Serving It Safe* pages 125-126)
 - **Group 3:** Follow Food Safety Guidelines for Transporting and Receiving Food for Off-Site Feeding (*Serving It Safe* pages 126-127)

Step 7: Cooling

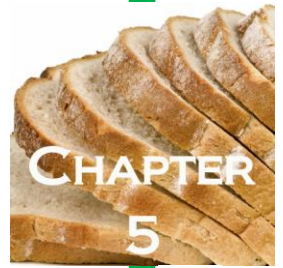
(*Serving It Safe* pages 127-128) (20 minutes)

Introduce this topic. Present a short lesson using the content. Ask questions to involve the participants and use their ideas. (10 minutes)

Activity 4: Shallow Containers Are Safer

(10 minutes for discussion)

Explain the activity that has been in progress for the past hour or more. Ask the three participants who monitored the cooling of the water in the three containers to share their results. Ask questions to encourage participants to relate the content in Follow Steps for Safe Cooling (*Serving It Safe* pages 127-128) to the results of this cooling experiment. End the discussion by calling on participants to suggest changes they should make to use the steps for safe cooling in their foodservice.

**Step 8: Reheating**

(*Serving It Safe* page 129) (5 minutes)

Provide a summary of the content. Ask questions to involve the participants and use their ideas.

3. Action Plan

(10-15 minutes)

Ask participants to turn to their Action Plan handout. Explain the Action Plan and relate the development of the plan for change to the participant outcomes for Chapter 5. Allow participants to work independently for about 5 minutes. Lead a discussion by calling on several participants to share changes they will make.

Some school districts may opt to collect the completed Action Plans and use them for documentation of participation in the training session. If this is done, copies of the completed Action Plans should be returned to the participants to allow them to implement their plans. Implementation will be enhanced if the school district director or another person can use the Action Plan and work with each participant to provide follow-up after the session.

4. Summary

Bring the discussion of Chapter 5 to a close using the summary comments (*Serving It Safe* page 130).

5. Assignment: Food Safety Checklist

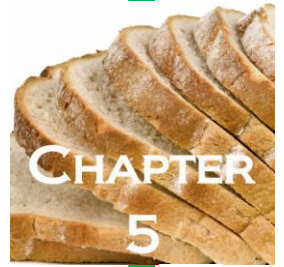
(*Serving It Safe* pages 131-136)

Ask participants to complete the Food Safety Checklist in their facility before the next session. Suggest that participants should either make a copy of the Food Safety Checklist or distribute copies to them. The completed checklist should be brought to the next session for discussion. Call attention to the directions for the checklist at the top of page 131 in *Serving It Safe*.

6. Session Feedback Form

(10-15 minutes)

Distribute a Session Feedback Form to each participant. Read aloud each item, explaining the response options. Allow participants to complete the form independently. Designate a table where participants place their completed forms as they leave.



ACTIVITIES: CHAPTER 5

How to Use the Activity Section

These activities can be used for independent learning or for small group work in a training session. The format for each activity is shown below.

- Chapter Number and Activity Number
- Title
- Purpose
- Estimated Time
- Materials
- Directions
- Follow-Up Discussion
- Answers

The activities will provide opportunities for participants to apply what they've learned and practice new skills. Using the activities as part of training sessions will enhance learning and help prepare the participants to make changes that promote food safety.

Activities for Chapter 5: A Process for Preventing Foodborne Illness

- **Activity 1: Receiving Decisions**
(*Trainer's Guide* pages 97-98)
- **Activity 2: Checking Temperatures of Specially Packaged Foods**
(*Trainer's Guide* pages 99-100)
- **Activity 3: Case Study—Safe In, Safe Out**
(*Trainer's Guide* pages 101-103)
- **Activity 4: Shallow Containers Are Safer**
(*Trainer's Guide* pages 104-106)



Chapter 5, Activity 1: Receiving Decisions

Purpose: To provide practice for participants on using safety guidelines during receiving

Estimated Time: 20 minutes

Materials: Each participant should have one copy of the handout.

Directions:

- **Group Activity:** Assign participants to work in pairs or small groups. If less time is available, use the activity with the large group.
- Distribute the handout and explain the directions. Emphasize the importance of justifying each answer with “Why?” The participants should refer to information in Chapter 5.
- Read the receiving situations aloud.
- As the groups are working, circulate around the room to provide coaching and feedback.

Follow-Up Discussion:

Call on various participants to share their answers as you discuss each item.

Answers:

1. Reject
2. Accept
3. Accept
4. Reject
5. Accept
6. Reject
7. Reject
8. Reject

RECEIVING DECISIONS

PARTICIPANT HANDOUT



Directions: Refer to *Serving It Safe* pages 106-111, to decide whether to accept or reject various items during the receiving process. Describe *why* you made the decision. Keep in mind that the situations described could affect food safety, but there are other considerations for receiving not discussed in this chapter.

	Accept	Reject	Why?
1. Eggs are delivered along with canned goods. The temperature of the truck feels very hot.			
2. Cases of fresh chicken are packed in crushed ice and the chicken looks and smells fresh.			
3. A food thermometer is used to test the internal temperature of three different cartons of milk. All tested milk is below 41 °F.			
4. Three one-quart containers of yogurt are outdated.			
5. Cases of lettuce look fresh with a firm texture. They are not wilted and have no signs of discoloration.			
6. Boxes of frozen broccoli are soft to the touch at the ends of boxes.			
7. Cartons of ice cream novelties have stains that appear to be from melting.			
8. Fresh-cut mixed salad greens have a temperature of 47 °F when a food thermometer is inserted between the bags. The salad greens inside the bags are obviously wilted.			



Chapter 5, Activity 2: Checking Temperatures of Specially Packaged Foods

Purpose: To provide practice for checking temperatures of specially packaged foods

Estimated Time: 30 minutes for 20 people

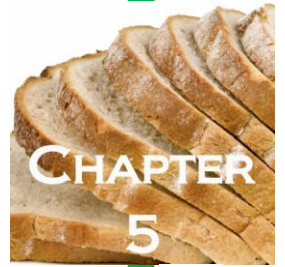
Materials:

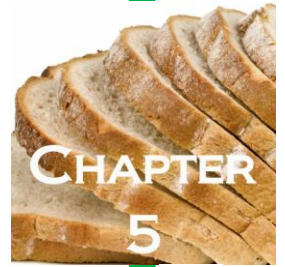
- 2 fresh eggs
- 1 small bowl
- 2 cartons of milk
- 2 packages of fresh-cut produce
- 2 frozen packages of vegetables
- 4 food thermometers
- Sanitizing wipes or sanitizing solution and paper towels
- 4 sheets of paper to record temperatures
- 4 pencils

Directions:

- **Group Activity:** Set up four learning stations: Station 1—eggs; Station 2—milk; Station 3—fresh-cut produce; Station 4—frozen vegetables.
- At each station, place a food thermometer, sanitizing wipes, the food to be tested (see above), and a sheet of paper and a pencil.
- For each station, explain and demonstrate the correct way to test the temperature of the food item during the receiving process.
- Have the participants number off 1 through 4 repeatedly until everyone has a number (1, 2, 3, or 4). Participants should go to the station with their matching number. Using the guidelines on how to test the internal temperature of each of these foods, each participant should test the internal temperature and record it on the paper. When all the participants in one group have completed a station, they should move to the right to the next station.
- All participants should have the opportunity to test the temperature of the food item at each of the four stations.

Follow-Up Discussion: After all participants have completed the temperature testing practice, discuss how these skills should be used during the receiving process. You may also want to point out how the temperature of the food items increased quickly while they were at room temperature. Refer to the temperature recordings at each of the learning stations. Use this opportunity to reinforce the importance of keeping food out of the temperature danger zone.





Chapter 5, Activity 3: Case Study—Safe In, Safe Out

Purpose: This case study illustrates the importance of planning ahead and following correct procedures for receiving food

Estimated Time: 20 minutes

Materials: Each participant should have a copy of the handout for the case study.

Directions:

- **Group Activity:** Provide each participant with a copy of the case study. Read it aloud, and then explain the directions.
- Allow the participants to discuss the case study in pairs or small groups.

Follow-Up Discussion: Call on several participants to share answers.

Answers:

1. What did Mary do correctly?

Answer: She put the dry foods in the storeroom for storage at a later time.

2. What did Mary do incorrectly?

Answer: She did **not** do the following things:

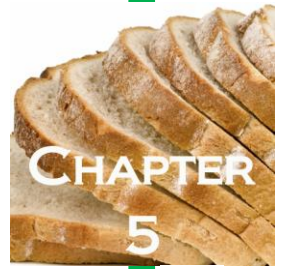
- Check for quality and condition of the incoming foods.
- Reject the milk.
- She loaded both refrigerated and frozen foods on a cart and stored them temporarily in the refrigerator. The frozen foods would have begun to thaw and lose quality.
- She did not communicate with her manager/supervisor.

3. What can Mary and her manager/supervisor do to prevent similar situations in the future?

Answer: They can

- ask the vendor to schedule future deliveries for less busy times in the day, such as early in the morning, so correct receiving procedures can be followed;

- arrange to have additional trained employees available when deliveries arrive;
- notify the vendor of the dirty milk case and cartons—insist that the vendor investigate and alleviate the problem; and
- have a plan for storing all foods at the proper temperatures immediately upon delivery.



CASE STUDY—SAFE IN, SAFE OUT

PARTICIPANT HANDOUT



The delivery truck arrived with a variety of foods—frozen foods, fresh produce, bags of fresh-cut produce, and some dry foods. Because it was almost serving time, Mary, the employee who was receiving, was in a rush to receive and store the foods. At the same time, the dairy's delivery person arrived with the milk for the remaining days of the week.

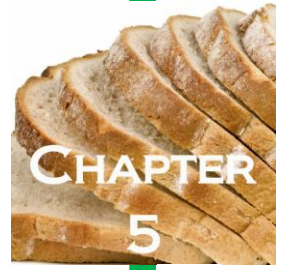
Mary quickly signed for the first shipment after glancing over the invoice and the purchase order. She noticed that dirt was on the milk cases and even on many milk cartons. She thought about rejecting the milk but felt she should not bother the manager who was meeting with an auditor. She decided to accept the milk and wash the cartons. Mary accepted the milk and gave a stern warning to the delivery person.

She moved the dry foods into the storeroom for later storage, after lunch. She loaded the frozen and refrigerated foods onto one cart and pushed it into the walk-in refrigerator to sort it later when she had time. She then took time to wash the dirty milk cartons in cold water to remove the soil before storage in the refrigerator. She did not tell the manager about the dirty milk cartons.

1. What did Mary do correctly?

2. What did Mary do incorrectly?

3. What can Mary and her manager/supervisor do to prevent similar situations in the future?



Chapter 5, Activity 4: Shallow Containers Are Safer

Purpose: To demonstrate that cooling food in shallow containers decreases the time it takes to reduce the internal temperature to meet food safety requirements

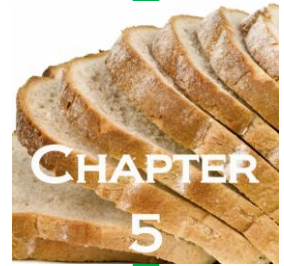
Estimated Time: 10 minutes for discussion

Materials:

- Container 1: 3-gallon stockpot filled with 2 gallons of water at 165 °F
- Container 2: 2 gallons of 165 °F water in a 4-inch-deep steam table pan
- Container 3: 2 gallons of 165 °F water in a 4-inch-deep steam table pan
- 4-inch-deep steam table pan filled with crushed ice
- Timer
- 3 sheets of paper and pencils for recording temperatures
- 3 food thermometers
- Metal pitchers to transport hot water
- 3 copies of the Daily Temperature Form—Internal Food Temperature (*Serving It Safe* page 163)

Directions:

- **Demonstration:** This demonstration should be done at the beginning of the session in order to track the cooling of the water over the period of an hour.
- Remind participants to cool food correctly. Cool cooked hot food from 135 °F to 70 °F within 2 hours and from 70 °F to 41 °F in an additional 4 hours for no more than a total cooling time of 6 hours. If the food has not reached 70 °F within 2 hours, it must be reheated immediately to 165 °F for 15 seconds.
- Set up the demonstration so all participants can see and hear.
- Assign three participants to monitor the temperature of the assigned containers every 15 minutes for 1 hour. For each 15-minute interval, the internal temperature of the water should be determined with the same food thermometer and recorded on a sheet of paper.



Container 1: 3-gallon stockpot filled with 2 gallons of water at 165 °F

1. Take the temperature to begin the 1-hour period; it should be 165 °F.
2. Immediately place the stockpot in the refrigerator.
3. Take the temperature every 15 minutes (3 times) in the next hour. Record the temperature.

Container 2: 2 gallons of 165 °F water in a 4-inch-deep steam table pan

1. Take the temperature to begin the 1-hour period; it should be 165 °F.
2. Immediately place the steam table pan of hot water in the refrigerator.
3. Take the temperature every 15 minutes (3 times) in the next hour. Record the temperature.

Container 3: 2 gallons of 165 °F water in a 4-inch-deep steam table pan

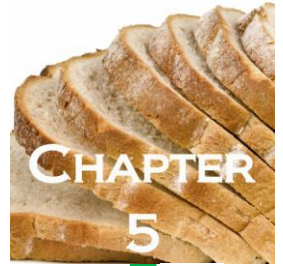
1. Take the temperature to begin the 1-hour period; it should be 165 °F.
2. Immediately place the 4-inch steam table pan of hot water in a 4-inch steam table pan filled with crushed ice.
3. Take the temperature every 15 minutes (3 times) in the next hour. Record the temperature.

- At the end of 1 hour, the three participants who were monitoring the temperatures should show and explain their temperature form. All temperatures would have decreased, but the 4-inch-deep pan of water cooled in the crushed ice will probably be the coldest.

Follow-Up Discussion: Discuss how this demonstration showed the importance of cooling food or liquids in shallow containers, either in the refrigerator or in crushed ice. End by sharing the information below.

- Foods of a creamier, thicker consistency, such as stew, cool internally at a slower rate than food items that have a more liquid consistency. Therefore, in this demonstration, the water would cool faster than a stew or mixed dish.

- A large stockpot containing 12 gallons of stew placed in a refrigerator can take 36 hours to cool from 135 °F to 50 °F.
- If two 6-gallon containers of stew are placed in an ice bath and stirred, it takes only 1 hour to reduce the temperature from 135 °F to 75 °F.
- If a steam-table pan of stew that is 2-inches deep is placed in the refrigerator, it takes 2 hours to cool from 75 °F to 40 °F. If the stew is 4-inches deep, it takes 8 hours. And if the stew is 8-inches deep, it takes 32 hours.
- This demonstration proves why shallow containers are safer.
- Most people associate the shallow end of a swimming pool with water safety so it is easy to remember that shallow containers of food represent improved food safety.



ACTION PLAN: CHAPTER 5

Instruction Sheet

Purpose: To provide an opportunity at the end of Chapter 5 for the participants to describe how they will use what has been learned

Estimated Time: 10-15 minutes

Materials: Each participant should have a copy of the Action Plan.

Directions:

- **Independent Activity:** This activity should be completed at the end of the discussion about Chapter 5.
- Explain the directions for completing the Action Plan. Allow participants to work independently to complete each item on their individual Action Plan.

Follow-Up Discussion: Allow participants to work on their individual Action Plan. When everyone has completed their form, call on several participants to share one plan for change.



CHAPTER 5: A PROCESS FOR PREVENTING FOODBORNE ILLNESS ACTION PLAN

PARTICIPANT HANDOUT



You have completed Chapter 5 and learned new precautions to prevent foodborne illness at each of the Eight Steps of the Foodservice Process.

You should now be able to describe one or more changes to be made to prevent foodborne illness at each step of the foodservice process.

Directions: For each category below, describe changes to be made, who is responsible, and when.

	Change to be made?	Who is responsible?	When?
Receiving			
Storing			
Preparing			
Cooking			
Holding and Serving			
Cooling			
Reheating			

Name: _____ Date: _____

SESSION 4: FEEDBACK FORM

PARTICIPANT HANDOUT



Date: _____ School: _____

Part 1: Please respond to items 1-5 below. Circle the number to indicate your level of agreement with each item. If you **Completely Disagree**, circle 1, on the left. If you **Completely Agree**, circle 4, on the right. If your opinion is somewhere in between, circle 2 or 3.

	Completely Agree	Agree	Disagree	Completely Disagree
1. What I learned will be useful to me.	4	3	2	1
2. The trainer presented the material in a way I could understand.	4	3	2	1
3. The practice activities helped me to understand the material.	4	3	2	1
4. I have completed the Action Plan for the lesson(s) and will use it to make changes in my foodservice facility.	4	3	2	1
5. I learned some ways to improve food safety in my facility.	4	3	2	1

SESSION 4: FEEDBACK FORM (CONTINUED)

Part 2: Please answer the following questions.

1. What information discussed in this session will be most useful in your own foodservice facility?

2. Are there food safety topics you would like to know more about? Please describe in the space below.

After completing this form, place it on the table designated by the trainer.

Thank you for participating in this training session.



SESSION 5: OVERVIEW

Objectives

Following the lesson, participants will be able to

- explain why food safety programs are needed in schools,
- describe the Process Approach for managing food safety,
- identify the requirements of a food safety program, and
- identify managers' and employees' responsibilities for a food safety program.

Materials Needed for the Trainer

- Serving It Safe* manual and *Serving It Safe Trainer's Guide*
- Flip chart, easel, and markers; chalkboard and chalk; or whiteboard and markers
- Materials required for selected activities

Materials Needed For Each Participant

- Place cards with the participants' names on them to assign seating
- A copy of the Action Plan handout for Chapter 6
- A copy of the Session Feedback Form
- Pen or pencil

Place a set of the materials at each assigned place before the session begins.

Time Schedule: Session 5

1 hour and 35 minutes

Section Title	<i>Serving It Safe</i> Manual Page(s)	Time Estimate
Session 5 Introduction		10 minutes
Chapter 6	137-149	
Why are food safety programs needed in schools?	138	5 minutes
What is the Process Approach for managing food safety?	138-143	30 minutes
What are the requirements of a school food safety program?	143-144	10 minutes
What are the managers' and employees' responsibilities for a food safety program?	144-148	20 minutes
Action Plan: Chapter 6	(<i>Trainer's Guide</i> page 119)	10-15 minutes
Session 5: Feedback Form	(<i>Trainer's Guide</i> pages 120-121)	10-15 minutes

When there are optional activities available, the estimated time for using those activities is not included in the time estimate for the session.



LESSON PLAN: CHAPTER 6

Session 5 Introduction

10 Minutes

1. Introduce yourself and offer welcoming remarks. Complete any administrative requirements, such as roll call.
2. If an assignment was made in Session 4, follow up with a discussion of the assignment before beginning Chapter 6.
3. To begin the session, distribute a copy of the Action Plan handout for Chapter 6 to each participant. The Action Plan will be completed at the end of the discussion and activities.
4. Explain any logistical information needed by the participants.



Chapter 6: Food Safety Programs in Schools

Total Time for Chapter 6 – 1 Hour and 5 Minutes



- 1. Introduce** Chapter 6 by reviewing the objectives. Participants will
 - explain why food safety programs are needed in schools,
 - describe the Process Approach for managing food safety,
 - identify the requirements of a food safety program, and
 - identify managers' and employees' responsibilities for a food safety program

- 2. Why are food safety programs needed in schools?**

(*Serving It Safe* page 138) (5 minutes)

Provide a summary of the content using your own words.

- 3. What is the Process Approach for managing food safety?**

(*Serving It Safe* pages 138-143) (30 minutes)

Define the Process Approach, and in your own words, introduce each of the Process Groups: No Cook, Same Day Service, and Complex Foods.

- a. No Cook**

(*Serving It Safe* pages 140-141) (10 minutes)

Ask participants to refer to page 140 to see the steps for the No Cook Process Approach. Give examples of foods that are not cooked, and discuss the five steps in the No Cook Process Approach. Highlight the standard operating procedures that are used to protect these foods throughout the process.

Emphasize the importance of record keeping to ensure that all the necessary tasks are completed and that temperatures are taken at each step.

- b. Same Day Service**

(*Serving It Safe* pages 141-142) (10 minutes)

Ask participants to refer to page 141 to see the steps for the Same Day Service Process Approach. Give examples of Same Day Service foods and discuss the six steps of this Process Approach. Emphasize the importance of the recommended temperatures during the cook and hot hold



steps. Review how to record internal temperatures in a log and discuss the importance of checking the temperatures.

c. Complex Food Preparation

(Serving It Safe pages 142-143) (10 minutes)

Ask participants to refer to page 143 to see the steps for the Complex Food Preparation. Give examples of Complex Food Preparation foods and discuss this eight-step Process Approach. Emphasize the importance of time and temperature in the cooling and reheating steps by reviewing the Food Code guidelines.

4. What are the requirements of a school food safety program?

(Serving It Safe pages 143-144) (10 minutes)

a. Written Standard Operating Procedures (SOPs)

(Serving It Safe page 144) (5 minutes)

Define Standard Operating Procedures, and refer to current SOPs for tasks such as hand washing, receiving food, and cleaning and sanitizing food contact surfaces.

b. Written plan for applying HACCP principles

(Serving It Safe page 144) (5 minutes)

Review the steps of keeping a written plan. Since this section of the manual does not go into detail, refer participants to www.nfsmi.org for additional information.

5. What are managers' and employees' responsibilities for a food safety program?

(Serving It Safe pages 144-148) (20 minutes)

a. Managers

(Serving It Safe pages 145-147) (10 minutes)

Summarize managers' six basic responsibilities related to a food safety program, and give examples from your own operation.

1. Develop policies and procedures.

Ask participants for examples of some food safety policies and procedures that are already in place. Then



discuss why these policies and procedures were developed and what purposes they serve.

2. Develop the food safety program.

Discuss the importance of reviewing the current food safety program and making modifications to it. Use examples from your operation.

3. Be a role model.

In addition to hand washing, ask participants for examples of model behaviors and practices.

4. Train employees.

Emphasize the importance of ongoing training to maintain food safety.

5. Supervise implementation.

Remind participants that everyone will be held accountable for maintaining a safe environment.

6. Verify SOP and employee documentation.

Ask participants to recall the discussion on documenting temperatures in logs and remind them of other records you keep in your program. Tell them that these records are reviewed and practices are monitored to identify and correct potential food safety problems.

b. Employees

(Serving It Safe pages 147-148) (10 minutes)

Introduce employees' two basic responsibilities related to food safety: follow standard operating procedures and follow the food safety program.

1. Follow standard operating procedures (SOPs).

Discuss the five elements (Purpose, Instructions, Monitoring, Corrective Action, and Verification and Record Keeping) of cleaning and sanitizing food contact surfaces. Then discuss the elements of another SOP that is used in your food service operation.

2. Follow the food safety program.

Each foodservice employee plays a different role in the foodservice operation and will therefore perform different responsibilities in following the food safety program. Discuss these different roles and responsibilities. For example, cooks are responsible for

checking and documenting the internal temperatures of food during the cooking process.

6. Action Plan

(10-15 minutes)

Ask participants to turn to their Action Plan handout. Explain the Action Plan and relate the development of the plan for change to the participant outcomes for Chapter 6. Allow participants to work independently for about 5 minutes. Lead a discussion by calling on several participants to share answers to items 1 and 2.

Some school districts may opt to collect the completed Action Plans and use them for documentation of participation in the training session. If this is done, copies of the completed Action Plans should be returned to the participants to allow them to implement their plans. Implementation will be enhanced if the school district director or another person can use the Action Plan and work with each participant to provide follow-up after the session.

7. Summary

Bring the discussion of Chapter 6 to a close using the summary comments (*Serving It Safe* page 149). Thank the participants for taking part in the seminar.

8. Session Feedback Form

(10-15 minutes)

Distribute a Session Feedback Form to each participant. Read aloud each item, explaining the response options. Allow participants to complete the form independently. Designate a table where participants place their completed forms as they leave.



ACTION PLAN: CHAPTER 6

Instruction Sheet

Purpose: To provide an opportunity at the end of Chapter 6 for the participants to describe how they will use what has been learned

Estimated Time: 10-15 minutes

Materials: Each participant should have a copy of the Action Plan (page 119).

Directions:

- **Independent Activity:** This activity should be completed at the end of the discussion about Chapter 6.
- Explain the directions for completing the Action Plan. Allow participants to work independently to complete each item on their individual Action Plan.

Follow-Up Discussion: When everyone has completed their form, call on several participants to share one plan for change.



CHAPTER 6: FOOD SAFETY PROGRAMS IN SCHOOLS ACTION PLAN

PARTICIPANT HANDOUT



You have completed *Serving It Safe*, Chapter 6: Food Safety Programs in Schools, and have been introduced to the purpose of a food safety program and how to manage it.

You should now be able to

- explain why food safety programs are needed in schools.
- describe the Process Approach for managing food safety,
- identify the requirements of a food safety program, and
- identify managers' and employees' responsibilities for a food safety program.

Directions: Answer the questions below to describe your plans to maintain a food safety program.

4. From our discussion of the standard operating procedures (SOPs), the element that needs the most work in our operation is (circle one):
- purpose,
 - instructions or step-by-step procedures,
 - monitoring,
 - corrective action, or
 - verification and record keeping.

5. To improve the way we follow standard operating procedures, we could change

6. To better meet the requirements of a school food safety program, we could

Name: _____ Date: _____

SESSION 5: FEEDBACK FORM

PARTICIPANT HANDOUT



Date: _____ School: _____

Part 1: Please respond to items 1-5 below. Circle the number to indicate your level of agreement with each item. If you **Completely Disagree**, circle 1, on the right. If you **Completely Agree**, circle 4, on the left. If your opinion is somewhere in between, circle 2 or 3.

	Completely Agree	Agree	Disagree	Completely Disagree
1. What I learned will be useful to me.	4	3	2	1
2. The trainer presented the material in a way I could understand.	4	3	2	1
3. The practice activities helped me to understand the material.	4	3	2	1
4. I have completed the Action Plan for the lesson(s) and will use it to make changes in my foodservice facility.	4	3	2	1
5. I learned some ways to improve food safety in my facility.	4	3	2	1

SESSION 5: FEEDBACK FORM (CONTINUED)

Part 2: Please answer the following questions.

3. What information discussed in this session will be most useful in your own foodservice facility?

4. Are there food safety topics you would like to know more about? Please describe in the space below.

After completing this form, place it on the table designated by the trainer.

Thank you for participating in this training session.