

Activities for Chapter 1

Food Safety Is Top Priority



1. *Could It Happen in Our Foodservice?*

(*Instructor Guide* page 54)

2. *Where are the Hazards?*

(*Instructor Guide* pages 55-56)

3. *Food Safety Risks*

(*Instructor Guide* page 57)

4. *Food Safety Checklist*

(*Instructor Guide* page 58; “Food Safety Checklist” on pages 86-89 in *Serving It Safe*)

5. *Chapter 1 Action Plan—Food Safety is Top Priority*

(*Instructor Guide* pages 59-60)

Chapter 1–Activity 1

Could It Happen in Our Foodservice?

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

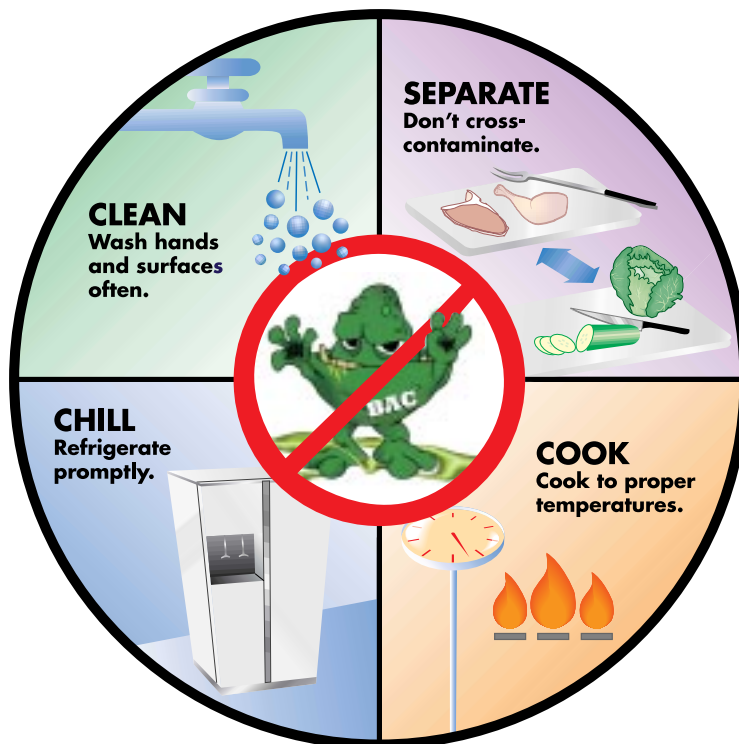
Estimated Time: Approximately 15 minutes to read the story and lead a short discussion

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.
- Read a local newspaper article or use other sources in foodservice 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 aloud to the group.
- After reading the account to the group, ask “Could this happen in your facility?” Call on several different 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 as a lead-in to content from *Serving It Safe*.



Chapter 1–Activity 2

Where 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, depending on the size of the group

Materials: For each participant, one copy of the “Where Are the Hazards” picture (*Instructor Guide* page 56) 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 point out the 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 contaminating food and equipment.**
14. **Wood cabinet is used to store food and cooking utensils.**

What Are the Hazards?

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: About 5 minutes to give directions and 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 secrets discussed.

Materials: For each participant one 3-inch-by-5-inch 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 participants of at least 15 people 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 of a kitchen risk: “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 chill it in an ice bath.”

- The participants should have several minutes to write their food safety risk. Then they should fold their card, and the Instructor should collect the cards.

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

- 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 is shown below.
 - Problems of cross-contamination
 - Problems of time-temperature control
 - Problems of personal hygiene
- When a topic has been discussed, for example cross-contamination, bring out 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.
- 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;” about 10 minutes for a group discussion

Materials: For each participant, a copy of the “Food Safety Checklist” (*Serving It Safe* pages 86-89) 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 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. Have participants keep the completed “Food Safety Checklist” as a baseline to compare with the “Food Safety Checklist” completed later in the training.

Chapter 1–Activity 5**ACTION PLAN****Food Safety is Top Priority**

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: About 15 minutes

Materials: For each participant, a copy of the Action Plan (*Instructor Guide* page 60)

Directions:

- **Independent Activity:** This activity should be completed at the end of Chapter 1.
- Explain the directions for completing the Action Plan. Allow participants to work independently to complete each item on their individual Action Plan.
- When everyone has completed their form, call on several participants to share one plan for change.

Follow-up Discussion: If time permits, after participants have completed their Action Plans, ask questions to have them share their answers to items 1, 2, and 3.

Chapter 1–Activity 5–Handout

ACTION PLAN

Food Safety is Top Priority

Participant Outcomes

- 1. The participant will identify sources of potential biological contamination of food.
- 2. The participant will describe a change to be made to prevent chemical contamination of food.
- 3. The participant will describe a change to be made to prevent physical contamination of food.

Directions: You have completed *Serving It Safe*, Chapter 1 and have been introduced to ways a food can become contaminated. Answer the questions below to describe your plans to prevent foodborne illness.

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

People

Food

Unsanitary facilities and equipment

Disease-spreading pests

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

- 3. To prevent physical contamination of food, a change we could make is

Name _____ Date _____



Activities for Chapter 2

Prevent Foodborne Illness—Understanding Microorganisms



- 1. Hands-on Temperature Taking**
(*Instructor Guide* page 62)
- 2. How to Calibrate a Food Thermometer**
(*Instructor Guide* page 63)
- 3. Bacteria Farm**
(*Instructor Guide* pages 64-65)
- 4. Cross-Contamination Matching Game**
(*Instructor Guide* pages 66-67)
- 5. Word Match**
(*Instructor Guide* pages 68-69)
- 6. Case Study: Field Trip Frenzy**
(*Instructor Guide* page 70)
- 7. Chapter 2 Action Plan—Prevent Foodborne Illness—Understanding Microorganisms**
(*Instructor Guide* pages 71-72)

Chapter 2–Activity 1

Hands-on Temperature Taking

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

Estimated Time: Time for the activity depends to some extent on the number of pairs of participants. Generally, the demonstration, practice, and discussion will take about 30 minutes.

Materials:

- Enough dial or digital food thermometers for each pair of participants to have one to share
- Sanitizing solution and paper towels or sanitizing wipes
- **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, 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 to take 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 to have one on which to practice.

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; a steam table pan of hot food; and a small item such as a patty or chicken nugget. Refer to *Serving It Safe* page 14.
 - 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 a food should be taken. Discuss the intervals that temperatures of food should be taken during holding and the serving period. Also discuss how the internal temperatures of food should be recorded in a Daily Temperature Form to document meeting temperature requirements. See *Serving It Safe* page 118 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: Approximately 30 minutes

Materials:

- Enough dial or digital food thermometers for each pair of participants to have one to share
- Sanitizing solution and paper towels or sanitizing wipes
- Enough glasses of crushed ice and water for each pair of participants to have one to share
- Several pairs of pliers or wrenches of the correct size for use to adjust the thermometers

Directions:

- **Group Activity (pairs):** Pair participants for 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 high altitude and are using the boiling-point method, adjust the boiling point temperature accordingly. See *Serving It Safe* page 15. Have pairs of participants practice calibrating a food thermometer 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

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

Estimated Time: Approximately 20 minutes to involve participants in contaminating 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 10-15 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.
 - Make your own growing medium for petri dishes. Following are instructions for preparing a culture medium. Mix 2 teaspoons of unflavored gelatin (1 packet) and 2 teaspoons of sugar with 2/3-cup of water. Bring the solution to a boil and stir for 1 minute until contents are dissolved. Pour 1/2-inch of the solution into each of five petri dishes. The petri dishes should have covers. If you use more petri dishes, you will need to increase the recipe for the growing medium.

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 having and following 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 to contaminate the agar.
- 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, cough or sneeze, swab from an unwashed can opener blade, or swab from the floor.
- Instruct participants 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 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. Use the same procedure to collect additional samples from any other area 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 two 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 at the places 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 a biological hazard.**

Chapter 2—Activity 4

Cross-Contamination Matching Game

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

Estimated Time: Approximately 20 minutes for an independent activity and discussion

Materials:

- For each participant, a copy of the game page (*Instructor Guide* page 67)
- Pencil or pen for each participant

Directions:

- **Independent Activity:** After discussing cross-contamination and giving examples of how it could 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, discuss the answers.

ANSWERS

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

Chapter 2—Activity 4—Handout

Cross-Contamination Matching Game

Directions: This game will give you the opportunity to determine how a food became contaminated by matching “how” with the description of the contamination scene. Beside each description, write

- F** Food to food contamination
H Hand to food contamination
E Equipment to food contamination

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.

- _____ 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 learning.

Estimated Time: About 20 minutes

Materials:

■ For each learner, one copy of the “Word Match” (*Instructor Guide* page 69)

Directions:

- Allow participants to work independently on this activity.
- Explain the directions and do Item 1 together as a group to model the activity. Then allow participants to work independently. When everyone has completed the matching, 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



Chapter 2—Activity 5—Handout

Word Match

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

1. Personal hygiene
 2. Cross-contamination
 3. Contaminated food
 4. Temperature danger zone
 5. Calibration
 6. Receiving procedure for milk
 7. Correct way to cool a hot food
- A. 41 °F to 140 °F
 - B. Cleanliness of a foodservice employee
 - C. The transfer of harmful microorganisms from hand to food, food to food, or equipment to food
 - D. Food that contains harmful microorganisms, a harmful chemical, or a harmful physical substance
 - E. Checking and adjusting a food thermometer to be sure it registers the correct temperature
 - F. Chill cooked hot food from 140 °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 with 2 hours, it must be reheated immediately to 165 °F for 15 seconds.
 - G. Open a carton and check the temperature when received

Chapter 2—Activity 6

Case Study: Field Trip Frenzy

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

Estimated Time: Approximately 20 minutes

Materials: None

Directions:

- **Group Activity:** Read the situation aloud for the group. Explain that small groups should work together to decide what to do. They should refer to *Serving It Safe* pages 20-22 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 o’clock, 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 20-22.

Chapter 2—Activity 7**ACTION PLAN****Prevent Foodborne Illness—Understanding Microorganisms**

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: For each participant, a copy of the Action Plan (*Instructor Guide* page 72)

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: 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 2—Activity 7—Handout

ACTION PLAN

Prevent Foodborne Illness—Understanding Microorganisms

Participant Outcomes

1. The participant will describe two changes to be made to prevent foodborne illness.
2. The participant will identify good practices already in place to prevent foodborne illness.

Directions: 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.

1. From our discussion of the three primary ways that foodborne illness can be prevented, the first way that needs work in our foodservice is (circle one way)
 - Practice good personal hygiene
 - Control time and temperature for foods
 - Prevent cross-contamination
2. Using the “way to prevent foodborne illness” that you circled above, describe below two changes you will make in your foodservice to prevent foodborne illness.

<i>Change to be Made</i>	<i>Who is Responsible</i>	<i>When</i>

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
4. Using the “way to prevent foodborne illness” that you circled above, describe how you know that good practices are already in place to prevent foodborne illness. Use the back of this form for additional space.

Name _____ Date _____

