

Hospitality Bridge Curriculum

Science Resources

Outcome #1

How Germs Are Transmitted (Spread) – and How to Protect Yourself

Understanding how germs spread helps you stay healthy. Germs include bacteria and viruses. Different germs spread in different ways. Sometimes you need to touch a sick person to get sick. Other times, germs can float in the air after someone coughs or sneezes, and you can breathe them in. Some germs can spread in more than one way.

When you know how germs spread, you can protect yourself and others.

1. Droplet Spread

Droplet spread happens when a sick person coughs, sneezes, or talks. Tiny drops of liquid leave their mouth or nose. These drops can get into the eyes, nose, or mouth of someone nearby.

These droplets can travel up to 6 feet. Germs from these droplets can also land on things like tables or doorknobs. Some germs can live on surfaces for hours or even days. If you touch the surface and then touch your face, you may get sick.

Diseases spread by droplets include the common cold, the flu, and whooping cough.

How to Stay Safe: Cough or sneeze into a tissue or your elbow, wash your hands often, use hand sanitizer when needed, and try not to touch your face.

2. Airborne Spread

Some germs can stay in the air for a long time after a person coughs or sneezes. These germs are very tiny and can travel through the air. You can breathe them in even if the sick person is not close to you.

Diseases spread through the air include chickenpox, measles, tuberculosis, and COVID-19.

How to Stay Safe: Airborne germs are hard to avoid. Sick people may need to stay away from others. Hospitals may use special rooms and masks such as N95s to protect people.

3. Indirect Contact (Touching Surfaces)

Some germs live on surfaces like tables, doorknobs, and phones. These germs can get

there from mucus, blood, spit, or poop. These objects are called fomites.

Surfaces touched by many people have higher risk. Norovirus, a stomach virus, can live on surfaces for days.

How to Stay Safe: Wash your hands often, clean shared surfaces, and avoid touching your face.

4. Fecal-Oral Spread (Poop to Mouth)

Some germs spread when tiny bits of poop get into the mouth. This can happen from dirty hands or from food or water with germs in it.

Examples include many kinds of stomach flu, Salmonella, and E. coli.

How to Stay Safe: Wash your hands after using the bathroom, before cooking or eating, and keep surfaces clean.

By [Kristina Herndon, RN](#)

Kristina Herndon, BSN, RN, CPN, has been working in healthcare since 2002. She specializes in pediatrics and disease and infection prevention.

This is an excerpt from a larger article. How Germs Are Transmitted—And How to Protect Yourself/verywellhealth.com/By [Kristina Herndon, RN](#) /Updated on September 08, 2025 (accessed 12/13/25)

The reading level of the article was adjusted via AI CoPilot.

Outcome #1

How Germs Spread - Group Presentations

Type of Transmission	How Transmission Occurs	Other Facts	Illness / Disease	Prevention	New Vocabulary

Outcome #1

How Germs Spread - Video Notes

Type of Transmission	How Transmission Occurs	Other Facts	Illness / Disease	Prevention	New Vocabulary

Outcome #2

Cleaning vs. Sanitizing: What Employees Need to Know

Why This Matters

Keeping kitchens, dining areas, guest rooms, and public spaces safe requires using the right process for the right job. Cleaning and sanitizing work together, but they are not the same thing. Understanding the difference helps prevent illness, keeps guests safe, and supports successful health inspections.

What Is Cleaning?

Cleaning means removing what you can see, such as:

- Dirt
- Food particles
- Grease
- Dust
- Spills

How it's done: Soap or detergent + water + scrubbing or wiping.

What cleaning does:

- Removes visible messes
- Helps reduce some germs by removing them
- Makes areas look and smell clean

What cleaning does NOT do:

- Does not kill most germs
- Does not make a surface safe for food or guest use on its own

Examples in food service:

- Washing dishes

- Cleaning prep tables
- Removing grease from kitchen equipment

Examples in hotels:

- Cleaning bathroom counters
- Wiping furniture and surfaces
- Dusting and general room cleaning

What Is Sanitizing?

Sanitizing means reducing germs to a safe level according to public health standards.

How it's done:

- Using a chemical sanitizer
- Using heat (e.g., dish machines)
- Allowing proper contact time

What sanitizing does:

- Reduces bacteria and some viruses
- Helps prevent foodborne illness
- Helps stop the spread of illness

What sanitizing does NOT do:

- Does not remove dirt
- Does not work on dirty surfaces

Examples in food service:

- Cutting boards
- Prep tables
- Food-contact surfaces

- Soda/coffee dispensers

Examples in hotels:

- Bathroom fixtures
- Remote controls
- Light switches
- Elevator buttons

Why the Order Matters

You must clean BEFORE you sanitize. Dirt, grease, and food residue block sanitizer from reaching germs, making the surface unsafe.

Simple rule: Clean first, then sanitize.

Final Takeaway

- Cleaning removes dirt you can see.
- Sanitizing removes germs you can't see.
- Both steps are required to keep guests safe and meet health codes.
- Always clean first, then sanitize.

Outcome #2

Cleaning	Sanitizing

Outcome #2

Cleaning vs. Sanitizing – Quiz

Name: _____

Date: _____

Part 1: Multiple Choice

1. What is the main purpose of cleaning?

- a. To kill harmful germs
- b. To remove visible dirt and debris
- c. To meet inspection requirements
- d. To sterilize the surface

2. What is the main purpose of sanitizing?

- a. To make surfaces look clean
- b. To remove stains
- c. To reduce germs to a safe level
- d. To remove food particles

3. Which step must always happen first?

- a. Sanitizing
- b. Cleaning
- c. Either can be done first
- d. It does not matter

4. Which must be sanitized in food service?

- a. Guest room nightstand

- b. Cutting board used for raw chicken
- c. Lobby carpet
- d. Windows

5. Which must be sanitized in hotel housekeeping?

- a. Bed linens
- b. Bathroom faucet handles
- c. Floors
- d. Curtains

Part 2: True or False

6. Cleaning alone is enough to prevent illness. _____

7. Sanitizing works best on dirty surfaces. _____

8. High-touch items should be sanitized regularly. _____

9. Sanitizers need time on the surface to work properly. _____

10. A surface may look clean but still have germs. _____

Part 3: Short Answer

11. Why is cleaning necessary before sanitizing?

12. Give one example from food service and one from hotels where sanitizing is required:

Food service example: _____

Hotel example: _____

Part 4: Scenario Questions

13. You wipe down a dining table and it looks clean, but a family just ate there. What else must you do, and why?

14. A hotel housekeeper cleaned the bathroom sink with soap and water. What is the next step to protect the guest?

Outcome #2

Cleaning vs. Sanitizing – Answer Key

Part 1: Multiple Choice

1. b – Removes visible dirt and debris
2. c – Reduces germs to a safe level
3. b – Cleaning must come first
4. b – Cutting board used for raw chicken
5. b – Bathroom faucet handles

Part 2: True or False

6. False
7. False
8. True
9. True
10. True

Part 3: Short Answer

11. Cleaning removes dirt so sanitizer can reach germs; dirt blocks the sanitizing process.
12. Food service example: prep tables, dishes, or cutting boards. Hotel example: bathroom fixtures, remotes, elevator buttons.

Part 4: Scenario Questions

13. Sanitize the table because cleaning only removes crumbs; sanitizing reduces germs to safe levels.
14. Sanitize the sink to kill germs and ensure guest safety.

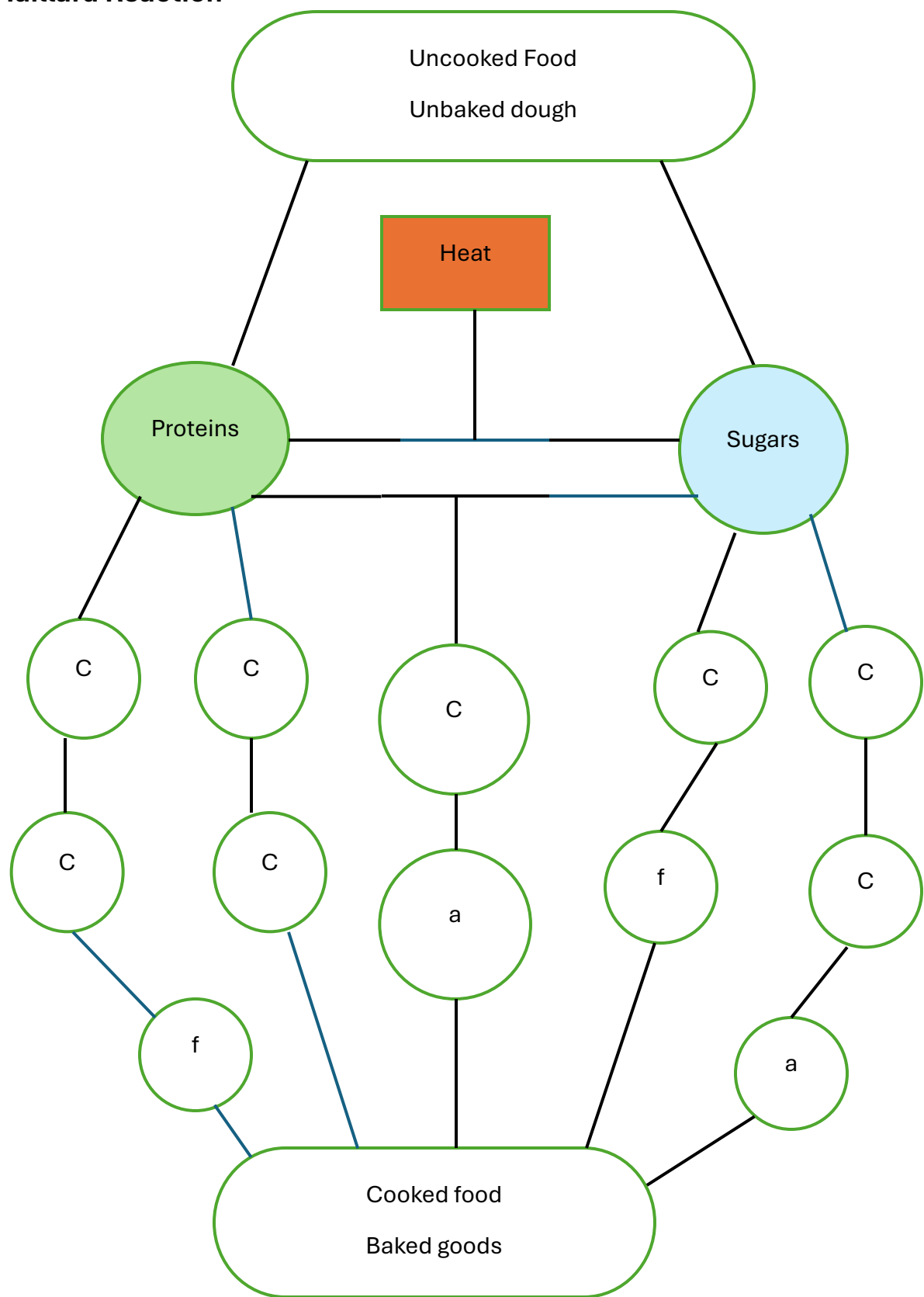
Instructions: Watch the video. Fill in the blank circles. Refer to the Word Bank.



Sugar/sugary compound
Compounds or c
Aromas or a

Flavors or f
Degrees Fahrenheit or °F
Degrees Celsius or °C

Maillard Reaction



Outcome #4

Take notes on how baking soda and baking powder work in baking.

Baking Soda	Baking Powder

Outcome #4

Chocolate Chip Cookies Recipe

Ingredients

- 2 1/4 cups Gold Medal™ All Purpose Flour
-
- 1/2 teaspoon salt
- 1 cup butter, softened
- 3/4 cup granulated sugar
- 3/4 cup packed brown sugar
- 1 egg
- 1 teaspoon vanilla
- 2 cups semisweet chocolate chips
- 1 cup coarsely chopped nuts, if desired

[Homemade Chocolate Chip Cookies Recipe - BettyCrocker.com](#) Accessed 2/23/26

Simple White Cake Recipe

Ingredients

- 1 cup white sugar
- 1/2 cup unsalted butter, softened
- 2 large eggs, room temperature
- 2 teaspoons vanilla extract
- 1 1/2 cups all-purpose flour
-
- 1/4 teaspoon table salt
- 1/2 cup whole milk, room temperature

[Simple White Cake Recipe](#), Allrecipes.com, accessed February 23, 2026

Irish Soda Bread

Ingredients

- 2 cups white flour (plain/all purpose)
- 1 ¾ cups whole meal flour (wholewheat, Note 1)
- 2-3 tbsp Extra Flour (either flour, for dusting)
-
- 1 1/2 tsp salt
- 2 cups buttermilk fridge cold (Note)

[World's best No Yeast Bread - Irish Soda Bread - RecipeTin Eats](#) Accessed 2/23/26

Outcome #4

Baking Soda or Baking Powder?

Read the recipes and decide which ingredient is missing baking soda or baking powder. Put an “X” in the correct column. Give a brief explanation for your answer.

Recipe	Baking Soda	Baking Powder	Explanation
Chocolate Chip Cookies			
White Cake			
Irish Soda Bread			

Outcome #4

Baking Soda and Baking Powder Scenarios

Each scenario describes a problem with baked goods. Decide if the problem is because of baking soda or baking powder. Explain your answer.

Scenario 1

You baked cookies for a bake sale. You try one and notice that the cookies taste like soap. Is the problem with baking soda or baking powder?

Scenario 2

Your friend baked a batch of muffins, but they didn't rise all the way and had a funny, tangy flavor. Is the problem with baking soda or baking powder?

Outcome #5

Outcome #5

Food Handler Vocabulary

Vocabulary Word	Definition
Food-Borne Illness	
Cross Contamination	
Food Microorganisms	
Pathogens	
Food Surfaces	
Utensils	
Food Storage	
Raw Food	
Ready to Eat (RTE)	
Pre-Prepared Food	
Cleaning	
Sanitizing	
Hand Washing Station	

Hair Restraints	
Hand Antiseptic	
Disposable Gloves	
Temperature	

Outcome #6

From Dough to Cookie: Chemical Reactions in Cookies

We start with dough. Balls of dough go onto a pan and into an oven pre-heated to a specific temperature. Most cookies bake between 350° and 375° Fahrenheit (175° to 190° Celsius). As the dough heats, a variety of chemical reactions occur that turn the dough into cookies. Write the steps that occur as the temperature of the dough rises.

Vocabulary:

Emulsifier _____

Salmonella _____

Leavening
Agent _____

Maillard
Reactions _____

Carmelization _____

Outcome #6

Cookie Activity Sheet

92°(F)

Question	Answer
What is an emulsion ?	
What are the two substances?	
What holds the substances together?	
What happens to the butter and dough at the temperature?	
What is released as the butter melts?	
What does the water turn into?	
What happens to the steam?	

136°(F)

Questions	Answers
What is Salmonella ?	
How does salmonella spread?	
How many Americans are infected by salmonella each year?	
What ingredients in cookie dough could contain salmonella?	

144°(F)

Questions	Answers
What starts to change at this temperature?	
Where do the proteins come from?	
The proteins are compared to what?	

What happens to the proteins when exposed to heat?	
What happens to the egg when the proteins tangle?	
What happens to the dough?	

212°F) A

Questions	Answers
What happens to the water at this temperature?	
What happens to the dough?	
What spreads across the surface?	
What happens to the steam?	
What does the steam leave behind?	
What two words are used to describe the cookie?	

212°F) B

What other ingredient makes the cookie light and flakey?	
What is a leavening agent ?	
What is the leavening agent in the cookie? (Give both names)	
What does the baking soda react with?	
What does this reaction release?	
What does the gas create?	

310°F)

Questions	Answers
What happens at this temperature?	
How do the reactions happen?	

What do the ring-like structures do?	
What else do the reactions cause?	

356°(F)

Questions	Answers
What breaks down at this temperature?	
What process occurs?	
What flavor compounds are formed?	
For a light-colored cookie, what temperature is suggested?	
For a dark colored cookie, what temperature is suggested?	

Outcome #6

Cookie Activity Sheet Answer Key

92°(F)

Questions	Answers
What is an emulsion ?	Two substances that don't want to stay together.
What are the two substances?	Water and fat
What holds the substances together?	Dairy solids
What happens to the butter and dough at the temperature?	The butter melts and the dough begins to spread out.
What is released as the butter melts?	Water
What does the water turn into?	Steam
What happens to the steam?	The steam expands and tries to escape

136°(F)

Questions	Answers
What is Salmonella ?	Bacteria that can cause food poisoning.
How does salmonella spread?	Salmonellas can spread through uncooked or under cooked foods such as meat, poultry and eggs
How many Americans are infected by salmonella each year?	142,000
What ingredients in cookie dough could contain salmonella?	Eggs

144°(F)

Questions	Answers
What starts to change at this temperature?	Proteins
Where do the proteins come from?	Eggs
The proteins are compared to what?	Coiled up balls of string

What happens to the proteins when exposed to heat?	They expand and get tangled with each other (tangled with their neighbors)
What happens to the egg when the proteins tangle?	Becomes almost solid
What happens to the dough?	It starts to harden (gain substance)

212°F) A

Questions	Answers
What happens to the water at this temperature?	It boils away
What happens to the dough?	It dries out and stiffens
What spreads across the surface?	Cracks
What happens to the steam?	It evaporates
What does the steam leave behind?	Air pockets (airy pockets)
What two words are used to describe the cookie?	Light and flakey

212°F) B

What other ingredient makes the cookie light and flakey?	The leavening agent
What is a leavening agent?	A substance used in dough or batter to make it rise
What is the leavening agent in the cookie? (Give both names)	Baking soda, bicarbonate of soda
What does the baking soda react with?	Acids
What does this reaction release?	Carbon dioxide gas
What does the gas create?	Air pockets

310°F)

Questions	Answers
What happens at this temperature?	Maillard Reactions
How do the reactions happen?	Proteins and sugars break down and reform

What do the ring-like structures do?	Reflect light that give food brown color
What else do the reactions cause?	Flavor and aroma compounds

356°(F)

Questions	Answers
What breaks down at this temperature?	Sugar molecules
What process occurs?	Caramelization
What flavor compounds are formed?	Sweet, nutty, slightly bitter
For a light-colored cookie, what temperature is suggested?	310°(F)
For a dark colored cookie, what temperature is suggested?	390°(F)

Outcome #7

The Importance of Personal Hygiene for Hospitality Employees

Definition of Hygiene

Hygiene refers to the habits, behaviors, and routines that help keep a person clean and healthy. This includes regular bathing, handwashing, wearing clean clothes, grooming hair and nails, and maintaining a sanitary work environment. Good hygiene protects both the individual and the people around them by reducing the spread of germs, bacteria, and illness.

Why Personal Hygiene Matters in the Hospitality Industry

1. Protecting the Health and Safety of Guests

Guests expect a clean and safe experience when they dine, stay overnight, or attend an event. Hospitality workers often handle food, drinks, linens, cleaning supplies, and guest belongings. Any lapse in hygiene can easily spread harmful germs.

Good hygiene helps prevent foodborne illnesses, protects guests with allergies or sensitive immune systems, reduces cross-contamination, and keeps kitchens, dining rooms, and guest areas sanitary.

2. Demonstrating Professionalism and Building Trust

A worker's appearance communicates how much they care about their job and their customers. Clean uniforms, tidy hair, clean hands, and fresh breath build confidence in the services being provided.

Professional hygiene strengthens the business's reputation and gives guests a positive first impression.

3. Meeting Industry Standards, Policies, and Legal Requirements

Many hospitality roles—especially food service—must follow strict hygiene rules required by health departments. These include frequent handwashing, wearing gloves, tying hair back, staying home when sick, and following cleaning procedures.

Meeting these standards protects both employees and guests while ensuring the business avoids fines or penalties.

4. Supporting a Healthy and Positive Workplace

Good hygiene affects coworkers just as much as guests. A clean, healthy team works better together and experiences fewer illnesses.

Benefits include fewer sick days, better teamwork, higher morale, and a more comfortable work environment.

5. Improving Guest Satisfaction and Encouraging Repeat Business

Guests notice clean uniforms, fresh-smelling spaces, and workers who follow hygiene rules. These details strongly influence customer satisfaction.

Good hygiene leads to better reviews, repeat visits, and positive word-of-mouth—all of which support business success.

Conclusion

Personal hygiene is a core part of professional performance in hospitality. By practicing good hygiene every day, workers protect health, build trust, meet legal standards, and help create safe and enjoyable experiences for every guest.

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Outcome #7

Hygiene

(definition)_____

Hygiene	Notes
Protecting Health and Safety of Guests	
Demonstrating Professionalism and Building Trust	
Meeting Industry Standards, Policies and Legal Requirements	
Supporting a Healthy and Positive Workplace	
Improving Guest Satisfaction and Encouraging Repeat Business	

Outcome #7

Personal Hygiene for Hospitality Employees – Quiz

Name _____

Date _____

Multiple-Choice Questions

1. What is the definition of hygiene?
 - A. Practices that keep people clean and prevent illness
 - B. Wearing a uniform
 - C. Cleaning only when guests complain
 - D. Following workplace rules
2. Why is personal hygiene especially important in hospitality?
 - A. Hospitality involves close contact with guests and food
 - B. It makes the job easier
 - C. Workers are constantly being photographed
 - D. It reduces the need for training
3. Which of the following is an example of good workplace hygiene?
 - A. Handling food without washing hands
 - B. Wearing clean uniforms
 - C. Sharing grooming items with coworkers
 - D. Using perfume instead of bathing
4. What can poor hygiene lead to in a hospitality setting?
 - A. Increased business
 - B. Better reviews
 - C. Spread of illness and customer complaints
 - D. More promotions

5. What is often required by health codes in hospitality settings?

- A. Wearing jewelry when preparing food
- B. Washing hands after handling raw food
- C. Working while sick
- D. Keeping long polished nails

True or False

6. Good personal hygiene helps create a professional first impression.

7. Proper hygiene only protects guests, not coworkers.

8. Hospitality workers should wash their hands frequently.

9. Clean uniforms are optional.

10. Strong hygiene practices improve customer satisfaction.

Short-Answer Questions

11. Name two ways poor personal hygiene can affect a business.

12. List two examples of good hygiene practices.

13. Why is handwashing important?

14. How does good hygiene support a positive work environment?

15. What is one professional reason for maintaining a clean personal appearance?

Answer Key – Personal Hygiene for Hospitality Workers Quiz

Multiple-Choice Answers

1. A

2. A

3. B

4. C

5. B

True or False

6. True

7. False

8. True

9. False

10. True

Short-Answer Examples

11. Illness outbreaks, customer complaints, negative reviews, health code violations.

12. Handwashing, clean uniforms, tied-back hair, clean nails.

13. Prevents the spread of germs and illness; keeps food safe.

14. Reduces illness, improves teamwork, creates a clean workspace.

15. Builds trust with guests and supports professionalism.

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Outcome #7

Personal Hygiene in Hospitality - Scenario-Based Worksheet:

Scenario 1: The Busy Breakfast Shift

Maria works the morning shift at a hotel restaurant. She is running late and skips washing her hands after quickly setting up the buffet. As the guests begin to arrive, she starts refilling the fruit trays and bread baskets. A coworker notices she is coughing and looks tired.

Questions:

1. What hygiene concerns do you see in this situation?
2. What risks could this create for guests or coworkers?
3. What should Maria have done differently before starting the shift?
4. If you were her coworker, how would you handle this?

Scenario 2: The Server with Strong Perfume

Jordan arrives to work wearing strong cologne. Throughout the evening, several guests wrinkle their noses when he approaches the table. One guest complains that the smell is overwhelming and affects their ability to enjoy the meal.

Questions:

1. Why might strong scents be a hygiene or professionalism issue in hospitality?
2. How could strong perfume impact guests with sensitivities or allergies?
3. What workplace guidelines would help prevent this issue?
4. What could Jordan do differently next shift?

Scenario 3: Cross-Contamination in the Kitchen

Sam is preparing sandwiches in the café. After handling raw chicken, he wipes his hands on a towel and continues assembling the sandwiches without washing his hands. A supervisor walks by and tells him to stop immediately.

Questions:

1. What hygiene problem is happening here?
2. Why is this dangerous, especially in food-service areas?
3. What steps should Sam take before touching ready-to-eat food?
4. How does proper handwashing prevent cross-contamination?

Scenario 4: The Housekeeper with Dirty Uniform

Ava, a hotel housekeeper, arrives wearing a uniform that has not been washed since yesterday. It has visible stains from the previous shift. She begins making beds and replacing towels in guest rooms.

Questions:

1. What message does a dirty uniform send to guests?
2. How could this affect the hotel's reputation?
3. What hygiene expectations should be in place for staff uniforms?
4. How might this impact Ava's coworkers?

Scenario 5: Illness on the Job

Chris feels slightly sick but decides to come to work because the team is short-staffed. Throughout the day, he blows his nose, touches shared tools, and continues helping prepare food.

Questions:

1. What are the risks of working while sick in hospitality?
2. How could Chris unintentionally spread illness?
3. What should the workplace policy be about sick employees?
4. What is the safest choice Chris could have made?

Reflection Questions

1. Which of these scenarios do you think happens most often in hospitality settings?
2. What is one personal hygiene habit you want to improve in your own work?
3. How does good hygiene benefit you, not just guests or the business?

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Facilitator Answer Key – Scenario-Based Worksheet

Scenario 1: The Busy Breakfast Shift

Hygiene Concerns:

- Maria skipped handwashing before handling food.
- She is coughing and appears ill.
- Handling buffet items while possibly sick.

Risks:

- Spread of germs to food and guests.
- Illness outbreak among guests and staff.
- Violates food safety standards.

Correct Actions:

- Wash hands before touching any food or equipment.
- Inform supervisor if feeling sick.
- Avoid handling food while coughing.

Coworker Action:

- Politely remind her to wash hands.
- Notify a supervisor if needed.

Scenario 2: The Server with Strong Perfume

Issues:

- Strong scents can cause allergic reactions.
- Overpowering smells may disrupt guest dining experience.

Risks:

- Guest complaints.

- Negative reviews.

Best Practices:

- Use minimal or no scented products.
- Follow scent-free workplace guidelines.

Jordan Should:

- Avoid strong perfume next shift.

Scenario 3: Cross-Contamination in the Kitchen

Issues:

- Handling raw chicken and touching food without washing hands.

Risks:

- Cross-contamination.
- Foodborne illness.

Correct Steps:

- Wash hands after touching raw meat.
- Sanitize surfaces.

Handwashing Importance:

- Removes harmful bacteria and prevents cross-contamination.

Scenario 4: The Housekeeper with Dirty Uniform

Issues:

- Dirty uniform sends negative message to guests.
- Shows lack of professionalism.

Impacts:

- Damages hotel reputation.
- May spread germs from one room to another.

Correct Practice:

- Clean uniform required daily.

Scenario 5: Illness on the Job

Issues:

- Chris is working while sick.

Risks:

- Spreading illness to guests and coworkers.
- Contaminating shared tools and food.

Correct Policy:

- Sick employees should stay home.

Correct Action:

- Chris should have notified supervisor and stayed home.

Reflection Questions (Sample Answers)

1. Scenarios 1 or 3 are most common due to fast pace and food handling.
2. Example: improving handwashing frequency.
3. Good hygiene protects personal health, reduces stress, and builds professionalism.

Outcome #8

Cross-Contamination Vocabulary

Use this worksheet to take notes while viewing the slides. Write the definition of each word. Write an example (Hint: Not all words will have an example). Write a sentence that will help you remember the word or that describes the word. Write any general notes you find helpful.

Germ

Definition: _____

Example: _____

My Sentence: _____

General Notes:

Bacteria

Definition: _____

Example: _____

My Sentence: _____

General Notes:

Cross-contamination

Definition: _____

Example: _____

My Sentence: _____

General Notes:

Raw

Definition: _____

Example: _____

My Sentence: _____

General Notes:

Ready-to-eat food

Definition: _____

Example: _____

My Sentence: _____

General Notes:

Food poisoning

Definition: _____

Example: _____

My Sentence: _____

General Notes:

Symptoms

Definition: _____

Example: _____

My Sentence: _____

General Notes:

Cutting board

Definition: _____

Example: _____

My Sentence: _____

General Notes:

Surface

Definition: _____

Example: _____

My Sentence: _____

General Notes:

Container

Definition: _____

Example: _____

My Sentence: _____

General Notes:

Outcome #8

Cross-Contamination Vocabulary Quiz (Slides)

Part 1: Multiple Choice

1. What are germs?
 - A. Tools used to prepare food
 - B. Very small living things that can cause sickness
 - C. A type of cooked food
 - D. Cleaning products

2. What does raw mean?
 - A. Already cooked
 - B. Kept in a container
 - C. Not cooked
 - D. Clean and ready to eat

3. Food poisoning is:
 - A. A way to clean food
 - B. A sickness caused by eating contaminated food
 - C. A type of cooked meal
 - D. A kitchen tool

4. Which word means 'food that does not need to be cooked again'?
 - A. Ready-to-eat food
 - B. Surface
 - C. Container
 - D. Symptoms

5. What is a cutting board?
 - A. Food storage container
 - B. A flat surface used for cutting food
 - C. A kind of raw food
 - D. A cooking tool used on the stove

Part 2: Matching

Match each vocabulary word to the correct definition. Write the letter next to the word.

- A. Signs that someone is sick
- B. The top of something
- C. Germs moving from something dirty to something clean
- D. A box or bowl used to store food
- E. Very small living things that can cause sickness

- 6. _____ Symptoms
- 7. _____ Surface
- 8. _____ Cross-contamination
- 9. _____ Container
- 10. _____ Germs

Part 3: Fill in the Blank

Use the word bank to complete the sentences.

Word Bank: bacteria, surface, raw, ready-to-eat, cutting board

- 11. Food that is not cooked is called _____.
- 12. A _____ is a flat tool used when preparing food.
- 13. _____ is a type of germ that can grow on food.
- 14. A countertop is an example of a _____.
- 15. Fruit that has been washed and does not need cooking is _____ food.

Outlook #8

Understanding Cross-Contamination of Food

Cross-contamination is when harmful germs or bacteria move from one place to another, especially from something dirty to something clean. In food safety, cross-contamination happens when germs from raw food, dirty hands, or unclean surfaces spread to food that is ready to eat.

Why Cross-Contamination Is Dangerous

Many raw foods—like raw chicken, meat, seafood, and eggs—often contain bacteria such as Salmonella or E. coli. These bacteria are killed only when food is cooked to a safe temperature. But if the bacteria spread to foods that are not cooked again, people can get food poisoning.

Common Ways Cross-Contamination Happens:

1. Raw food touching cooked or ready-to-eat food.
2. Using the same cutting board or knife.
3. Unwashed hands.
4. Dirty surfaces or towels.

How to Prevent Cross-Contamination:

1. Separate raw foods from other foods.
2. Clean hands, tools, and surfaces.
3. Use different tools for raw and cooked foods.
4. Store food safely in covered containers.

Understanding cross-contamination helps keep you, your family, and your community healthy.

Outlook #8

Cross-Contamination Vocabulary List

Germs: Very small living things that can cause sickness.

Bacteria: A type of germ that can grow on food and make people sick.

Cross-contamination: When harmful germs move from something dirty to something clean.

Raw: Not cooked.

Ready-to-eat food: Food that is already cooked or prepared and does not need more cooking.

Food poisoning: Sickness caused by eating food with harmful germs.

Symptoms: Signs that someone is sick (for example: stomach pain, vomiting, fever).

Cutting board: A flat surface used for cutting food.

Surface: The top of something, like a countertop or table.

Tools: Items used to prepare food, such as knives, spoons, or cutting boards.

Container: A box or bowl used to store food.

Prevent: To stop something from happening.

Separate: To keep things apart or away from each other.

Store: To keep food in a safe place, like a refrigerator or container.

Juices: Liquid that drips from raw meat, which may contain germs.

Outlook #8

Fill-in-the-Blank Activity (Vocabulary)

1. _____ are very small living things that can cause sickness.
2. _____ is when harmful germs move from something dirty to something clean.
3. Food that is not cooked is called _____.
4. _____ is sickness caused by eating food with harmful germs.
5. A _____ is a flat surface used for cutting food.
6. To keep things apart or away from each other means to _____ them.
7. A _____ is a box or bowl used to hold food.
8. Signs like stomach pain or fever are called _____.

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Outlook #8

Cross-Contamination Quiz

Part 1: Multiple Choice

1. What is cross-contamination?
 - A. Cooking food at high heat
 - B. Germs spreading from something dirty to something clean
 - C. Storing food in the refrigerator
 - D. Washing hands before cooking
2. Which food can easily cause cross-contamination?
 - A. Bread
 - B. Raw chicken
 - C. Apples
 - D. Cooked rice
3. What does 'raw' mean?
 - A. Ready to eat
 - B. Very hot
 - C. Not cooked
 - D. Frozen

Part 2: True or False

1. Raw meats can contain harmful bacteria. (True/False)
2. It is safe to use the same cutting board for raw meat and vegetables without washing it. (True/False)
3. Washing hands can help prevent cross-contamination. (True/False)

Part 3: Short Answer

1. What is one way to prevent cross-contamination?
2. Why should raw food be stored on the bottom shelf of the refrigerator?
3. Name one symptom of food poisoning.

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Outlook #8

Cross-Contamination Scenarios

Instructions: Read each scenario carefully. Answer all questions in complete sentences on the lines provided.

Scenario 1: The Cutting Board

Maria is preparing dinner. She cuts raw chicken on a cutting board. When she is finished, she wipes the board with a towel but does not wash it with soap and water. Then she uses the same board to cut vegetables for a salad.

1) What mistake did Maria make?

2) How could she have prevented cross-contamination?

3) Why is using the same cutting board for raw chicken and salad dangerous?

Scenario 2: The Grocery Bag

James buys raw meat and apples at the grocery store. He puts them in the same bag. When he gets home, he takes the apples out and puts them on the counter without washing them. Later, he eats one of the apples.

1) What is the possible source of germs in this scenario?

2) What should James have done differently at the store?

3) What should he have done before eating the apples?

Scenario 3: The Dirty Hands

Lena is making sandwiches for her family. Before cooking, she plays with her dog and checks her phone. She does not wash her hands. Then she prepares the sandwiches and serves them.

1) What did Lena forget to do before preparing food?

2) How could germs have spread to the sandwiches?

3) What is one safe habit Lena should practice in the kitchen?

Scenario 4: The Refrigerator Drip

In Sam's refrigerator, a package of raw chicken is on the top shelf. Some liquid from the chicken leaks and drips onto a container of cooked pasta on the shelf below.

1) What went wrong in this situation?

2) Why should raw meat be stored on the bottom shelf?

3) What should Sam do with the cooked pasta now?

Scenario 5: The Shared Spoon

At a potluck, Carlos uses a spoon to taste his raw chicken marinade. Later, without washing the spoon, he uses the same spoon to stir the cooked chicken.

1) Why is reusing the same spoon unsafe?

2) How could this spread harmful bacteria to the cooked food?

3) What should Carlos have done with the spoon?

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Outcome #9

Ergonomics for Culinary Workers

Ergonomics is the practice of working in ways that help protect your body. Many culinary jobs involve standing for long periods of time, lifting heavy items, and using tools every day. Good ergonomics can prevent injuries and help workers feel better while doing their jobs.

Standing Safely

Culinary workers often stand in one place while they prepare food. Standing the right way can help reduce pain in your back, legs, and feet.

- Keep your back straight.
- Bend your knees slightly so your body stays relaxed.
- Wear non-slip shoes to prevent slipping on wet floors.

Lifting the Right Way

Workers lift boxes, pots, and equipment. Lifting the wrong way can cause back injuries.

To lift safely:

- Bend your knees, not your waist.
- Keep the item close to your body.
- Lift with your legs.

Using Tools Safely

Using the correct tools makes work easier and safer.

- Use sharp knives.
- Keep your cutting board at a comfortable height.
- Keep your station organized.

Taking Breaks

Kitchen work is fast paced. Breaks help your body recover.

- Stretch your hands and arms.
- Sit when you can.
- Drink water often.

Regular breaks help you stay focused and reduce the chance of injury.

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Outcome #9

Student Worksheet: Discussion Questions – Ergonomics for Culinary Workers

Answer each question using complete sentences. Use the space provided for your responses.

1. What ergonomic challenges have you seen or experienced in a kitchen or other workplace?

2. Which ergonomic habits do you think are the hardest for workers to maintain? Why?

3. Why do you think people often lift with their backs even when they know it can cause injuries?

4. What changes could a workplace make to encourage safer lifting practices?

5. How does the height of a workstation affect comfort and safety?

6. What kitchen tools do you think are designed well for ergonomics? Which ones could be improved?

7. Why do small discomforts, such as wrist or back strain, sometimes lead to bigger injuries over time?

8. What signs should workers look for that indicate they need a break or posture adjustment?

9. In busy kitchens, workers often feel pressure to move quickly. How can a kitchen balance speed and safety?

10. What can supervisors or coworkers do to support good ergonomic practices?

11. Why do you think workers skip breaks even though breaks help prevent injuries?

12. How does staying hydrated impact focus, safety, and performance?

13. Scenario: A prep table is too low for a worker. What could be done to improve the situation?

14. Scenario: Two workers need to move a heavy box. What is the safest plan?

15. Scenario: A worker repeats the same task for several hours. What strategies can reduce strain?

Outcome #9

Ergonomics for Culinary Workers – Quiz

Name_____ Date_____

Part A: Multiple Choice

Choose the best answer for each question. Circle your answer.

1. What is ergonomics?

- a. A way to cook food faster
- b. A practice that helps people work safely and comfortably
- c. A kind of kitchen tool
- d. A type of exercise

2. Why is good posture important for culinary workers?

- a. It makes food taste better
- b. It helps prevent back and leg pain
- c. It helps workers move more quickly
- d. It keeps knives sharp

3. Which is the safest way to lift heavy items in the kitchen?

- a. Bending at the waist
- b. Pulling the item with one hand
- c. Lifting with your leg muscles
- d. Twisting your back while lifting

4. Why should knives be kept sharp?

- a. Sharp knives look more professional
- b. Sharp knives are safer because they cut cleanly
- c. Sharp knives are cheaper
- d. Sharp knives reduce the need for cutting boards

5. What is one benefit of taking short breaks at work?

- a. It makes the shift shorter
- b. It allows workers to check their phones
- c. It helps the body recover and reduces injury risk
- d. It is required by all kitchens

Part B: Short Answer

Answer each question in 1–2 complete sentences.

6. Why is it important to keep your work area organized?

7. How can non-slip shoes help prevent injuries in the kitchen?

8. What body part should you not use when lifting heavy items? Why?

9. Why is staying hydrated important during a busy kitchen shift?

10. Name one way to protect your hands, arms, or back while working.

Part C: True or False

11. Good ergonomics can help prevent injuries at work.

Circle one: True False

12. It is safe to bend at the waist when lifting heavy items.

Circle one: True False

13. Taking short breaks can help you stay focused.

Circle one: True False