

Home • Lesson 18

BAG LUNCH

Class periods: Three 30-min. class periods

Supplement Section: Home PA PAS for FCS: 9.3.3 A, 9.3.3 B, 9.3.6 B, 9.3.9 B.

National Education Standards: FCS 8.2.1, 8.2.2, 8.2.3, 8.2.4, 8.2.5, 8.2.6, 9.2.1, 9.2.2, 9.2.3, 9.2.4, 9.2.5, 9.2.6; LA 2, 3, 035, 132, 278; MA 130; SC 5.

LESSON SUMMARY

Students will learn about foods that are least likely to become unsafe due to microbial contamination and they will prepare a safe and nutritious bag lunch.

Objectives

The students will be able to:

- Choose the safest food (from a list of foods) in a bag lunch and state why it would be the least likely to cause food poisoning.
- Apply food safety rules when packing a lunch.
- Prepare a safe and nutritious bag lunch.
- Make a poster using pictures from newspapers that shows foods that need to be kept cold in a lunch versus those that do not need to be kept cold.

Materials Provided

Overheads:

1. Four Simple Steps to “Fight BAC”
2. The Lunch Bunch Fact Sheet
3. Types of Freezer Packs

Worksheets:

1. Is This Lunch Safe or Unsafe?
2. Bag the Best
3. Bag the Best Discussions Questions
4. Using the Facts
5. Don’t Feed the Enemy

Handout:

1. Safety Sleuth Food Slips

Teacher Information Sheets:

1. Is This Lunch Safe or Unsafe? Answer Key
2. Bag the Best Discussion Questions Answer Key
3. Using the Facts Answer Key
4. Don’t Feed the Enemy Answer Key
5. Evaluation for the NIE Activity: Food Safety in Bag Lunches Poster

Resources

Partnership for Food Safety Education Web site: www.fightbac.org

Suggested Presentation Aids

- Empty food containers and wrappers
- Magazines and newspapers
- Blue ribbons for winning groups: “Design A Lunch Competition”
- Freezer pack supplies: commercial gel pack, leak-proof plastic freezer container, resealable sandwich bags, ice cubes in a leak-proof freezer container, and a frozen juice box
- Foods to prepare the “perfect” bag lunch (students will hand in a list of foods during or after their group bag lunch presentation)

LESSON PLAN

Class Period 1

Introduction

You have been handed the “ball” at the end of the food safety chain. It is now your turn at bat to safely choose, store, prepare, and pack foods for your bag lunch. Lunch foods are most often prepared in the morning and not eaten until the afternoon. This gives microorganisms plenty of time to multiply. Lunches need to be prepared with food safety in mind.

Lesson Sequence

Introduce/review safe procedures for home kitchens. Overhead 1: Four Simple Steps to “Fight BAC”.

- Ask students what they might bring in a lunch. Write answers on the board.
- What food safety rules do they need to remember when they pack a lunch? (Keep it clean, don’t cross-contaminate, keep it cold, keep it hot.) Review Fight BAC principles.
- Overhead 2: The Lunch Bunch Fact Sheet. Discuss each fact with students.
- Use a thermometer to take the temperature of a student’s locker. Ask students if this is a safe temperature for letting cold or hot food set out for two or more hours.
- How do you keep cold food safe for lunch if you can’t keep it in the refrigerator? Use a freezer pack with the cold food to keep it cold for approximately four hours. Pack the freezer pack next to the foods that need to be kept cold.
- Demonstrate/discuss the different types of freezer packs and how to make a freezer pack. (The items needed for the demonstration will need to be gathered before the lesson; see Presentation Aids). Overhead 3: Types of Freezer Packs.

Closure class period 1

- Is This Lunch Safe or Unsafe? (Worksheet 1, Teacher information sheet 1) Students will rate six bag lunches as safe or unsafe and fill in responses on the worksheet.

Class Period 2

- Bag the Best: Students pick a safe brown bag lunch from a list of foods or from empty containers or wrappers. (Worksheets 2 and 3, Teacher information sheet 2) Have students bring in empty food containers and wrappers of foods on the worksheet list. Instruct students to choose the safest item from each list of ingredients on the Bag the Best Worksheet food list or from their containers/wrappers. Refer to worksheet for discussion questions.

Closure class period 2

- Give the students the activity sheet “Using The Facts.” (Worksheet 4 and Teacher information sheet 3) Have them complete the activity by rating each lunch component for most safe to least safe. This could be done individually or in teams.

Class Period 3

- “Design a Lunch Competition”
Groups of two to four students will design, illustrate, and prepare the “perfect” bag lunch. They can select any products they wish to include. They must specify what foods to include, develop a HACCP plan for packing a lunch (what are the CCP of packing a bag lunch?), how to prepare the foods using the Fight BAC principles, and how to pack the foods. Let each group give a presentation to try to sell their lunch. Each group should try to convince the class that their lunch is the best and safest. Discussion: What methods did they use to keep the food safe? Are there any food safety hazards? How could lunches be improved?

Closure class period 3

- Students will evaluate the procedure for preparing the bag lunch using the HACCP plan they developed. Conclusion: If they followed the HACCP plan, then the bag lunch is safe to eat.

Suggested Learning Activities

- Have students cut food pictures out of newspapers or magazines and make a poster that shows foods that need to be kept cold in a lunch versus those that don't need to be kept cold.
- Don't Feed the Enemy (Worksheet 5 and Teacher information sheet 4). Students rate foods as safe or unsafe for brown bag lunches. State why unsafe foods are unsafe and what to do to make them safer. Use the Don't Feed the Enemy Worksheet to fill in results of safe and unsafe foods for a bag lunch. If the food is unsafe, note what characteristic(s) make(s) it unsafe. Write how to make sure that the food is safe for a brown bag lunch or write in an alternative food more suitable for a brown bag lunch.
- Using the "Safety Sleuth" Handout 1, cut out the food slips. Students will decide which foods are safe or unsafe. Read the description on the slip of paper. Ask students to tell you which foods are safe, unsafe, or need washing. If the food is unsafe, throw it into the trashcan for emphasis. Continue until all slips are used. Emphasize that people should wash their hands after touching unsafe foods. Students could also take turns reading the food slips and deciding as individuals or in small groups which foods are safe or unsafe.

Evaluation

- Bag the Best: Completion of the worksheet with emphasis on why they chose each food or beverage.
- Presentation of the "Perfect Bag Lunch." Each group will present their bag lunch

and classmates will evaluate for foods chosen that are least likely to become unsafe due to microbial contamination, preparation of bag lunch using Fight BAC principles, and use of safe packing of foods. Did each group follow their HACCP plan?

- Is This Lunch Safe Or Unsafe? This activity can be used as a quiz to test knowledge of safe bag lunch preparation, packing, and storage principles.
- Using the Facts will be graded for accuracy of information.
- Newspaper article poster will be graded for organization, neatness, spelling, and completed on time. (Teacher information sheet 5: NIE Activity: Food Safety in Bag Lunches Poster)
- Quiz #18
- Examination #5 at the end of the Home unit.

References

Creating Informed Citizens for Tomorrow's Food Safety Decisions. Colorado State University Cooperative Extension: A Food Safety Curriculum for Middle/Junior High School Students. Microbial Alert Unit: Bag the Best, Lesson M-8, Don't Feed the Enemy, Lesson M-9, Safe or Unsafe- What Would You Do?, Lesson M-11.

Producer through Consumer: Partners To A Safe Food Supply. Purdue University Cooperative Extension Service. The Lunch Bunch: Lesson 5 p45-49.

Operation Risk: Michigan State University Cooperative Extension. Lesson 2, p. 8-11 and Lesson 4, p. 14-15.

Overhead 1

FOUR SIMPLE STEPS TO “FIGHT BAC”

1. Clean: Wash hands and surfaces often

2. Separate: Don’t contaminate

3. Cook: Cook to proper temperatures

4. Chill: Refrigerate promptly

Overhead 2

The Lunch Bunch Fact Sheet

- Foods that are not prepared and stored properly can make us sick. This includes lunch foods.
- All perishable foods must be kept cold. This includes foods like meat, poultry, milk, and milk products, eggs, and any foods that contain some of these.
- To keep foods cold you can use:
 - * A cooler with ice or freezer pack inserts
 - * A lunch box or insulated bag with freezer inserts
 - * Frozen sandwiches as a cold pack
 - * Frozen box drinks as a cold pack
 - * A thermos to keep cold foods cold
- Hot foods, like soup or stew, must be kept hot.
- To keep hot foods hot, heat it to the highest possible temperature before pouring it into a thermos that has been rinsed with hot water.
- Wash hands before preparing and eating your lunch. Use wet hand wipes if soap and water are not available.
- Do not leave your cooler or lunch bag in a warm car or direct sunlight. Put it in the coolest place possible. The back passenger seat is cooler than the trunk.
- Wash coolers or lunch boxes after each use to keep bacteria in check.

Overhead 3

TYPES OF FREEZER PACKS

A freezer pack can keep cold food cold for up to four hours. For maximum benefit, pack the freezer pack next to the foods that need to be kept cold.

- Commercial gel-filled pack
- Ice in a leak-proof plastic container
- Leak-proof plastic container filled with water and frozen
- A frozen juice pack
- A sandwich frozen overnight (the sandwich cannot be used to keep other food cold)

Worksheet 1

Name _____

Class/Period _____

Date _____

IS THIS LUNCH SAFE OR UNSAFE?

Rate the following lunch situations as safe or unsafe.

1. After dinner, David made a chicken salad sandwich for his lunch. He put it in his backpack on the kitchen table so he wouldn't forget it in the morning.

safe _____ unsafe _____

2. Jim likes leftovers for lunch. Today, he took coleslaw, meat loaf, and rice from the refrigerator. At school, he asked his teacher to please put his lunch in the refrigerator.

safe _____ unsafe _____

3. Mike took a leftover burrito to school in his lunch. The burrito had refried beans and meat in it. Mike put his lunch on the heater when he got to school to keep it warm for lunch.

safe _____ unsafe _____

4. On Sundays, Alyssa makes five sandwiches for her lunches and freezes them. Each morning, she puts one of the frozen sandwiches in her backpack.

safe _____ unsafe _____

5. Janet bought an extra carton of milk at lunch and put it in her desk to drink during her after-school club meeting.

safe _____ unsafe _____

6. Sam's favorite lunch is a bean burrito. His mother makes them with leftover refried beans from the refrigerator, rolled in a flour tortilla and wrapped in plastic. At school, Sam puts his lunch bag on the shelf with his coat.

safe _____ unsafe _____

Worksheet 2

Name _____

Class/Period _____

Date _____

Bag The Best

Instructions: From each column below or from the empty food containers and wrappers, choose one item for your brown bag lunch and state why it would be the least likely to cause food poisoning.

Food List:

Beverage	Sandwich	Snack	Fruit/Vegetable
milk	peanut butter	pudding	slice of apple
lemonade	ham & cheese	yogurt	raisins
peach nectar	bean burrito	bagel & cream cheese	peeled banana
fruit punch	egg salad	slice of pie	peach half

Safest choice of beverage and why:

Safest choice of sandwich and why:

Safest choice of snack and why:

Safest choice of fruit/vegetable and why:

Worksheet 3

Name _____

Class/Period _____

Date _____

BAG THE BEST***Discussion Questions***

1. What foods did you select as the safest for a brown bag lunch and what was your reason?
2. What can happen to foods if they are not refrigerated between preparation and eating time?
3. List common lunch/picnic foods that might cause food poisoning.
4. List common lunch/picnic foods that are unlikely to cause food poisoning.
5. How should you select foods for a brown bag lunch that will not be refrigerated?

Worksheet 4

Name _____

Class/Period _____

Date _____

Using The Facts

Pretend you are packing a lunch that will not be refrigerated until you eat it four hours later. For each group of foods, mark the **safest** choice with a #1, the safe choice with a #2, and the **unsafe** choice with a #3. There are two safe choices and one unsafe choice in each group.

_____ cold turkey sandwich packed without a freezer pack

_____ cold turkey sandwich packed with a freezer pack

_____ frozen turkey sandwich packed with a freezer pack

_____ cold carton of yogurt packed with a freezer pack

_____ frozen carton of yogurt packed with a freezer pack

_____ cold carton of yogurt packed without a freezer pack

_____ cheese slices packed with a juice box

_____ cheese slices packed with frozen juice box

_____ cheese slices packed next to a frozen juice box

Worksheet 5

Name _____

Class/Period _____

Date _____

Don't Feed the Enemy

Directions: In column 1, decide whether each food is safe or unsafe for a brown bag lunch. Remember that the food will be in the danger zone for longer than two hours. In column 2, if the food is unsafe note what characteristics make it an unsafe food. In column 3, write a safe way to make that food safe for a brown bag lunch or write an alternative food more suitable for a brown bag lunch.

Food Item	Safe or unsafe	If unsafe, why is it unsafe?	How to store to make safe, or alternate food
Lemonade			
Raisins			
Milk			
Peanut butter			
Banana Bread/fresh			
Sliced apples			
Pudding with milk			
Jello			
Cottage Cheese			
Egg salad			
Bean burrito			
Sliced ham			
Mayonnaise			
Mustard			
Cut raw vegetables			
Yogurt			
Cream cheese			
Dried salami			
Cheese			

Creating Informed Citizens For Tomorrow's Food Safety Decisions, Karen Wilken. Teacher's Manual: Middle/Junior High School Food Safety Curriculum. Colorado State University Cooperative Extension.

Handout 1**Safety Sleuth**

Ham sandwich, made last night and kept in the refrigerator

Ham sandwich, made a week ago and kept in the refrigerator

Whole pear, on the floor

Carton of yogurt, left on the counter for four hours

Unwashed carrots, kept in the refrigerator

Peanut butter sandwich, made last night and left on the counter for four hours

Crackers and cheese slices, left on the counter for five hours

Unwashed grapes, left on the counter for four hours

Turkey sandwich, left in a lunch bag with no freezer pack for four hours

Glass of milk, left out of the refrigerator for fifteen minutes

Tuna fish sandwich, made last night and refrigerated, then packed with a freezer pack in a lunch bag for three hours

Teacher information sheet 1 Answer Key

Is This Lunch Safe or Unsafe?

1. **Unsafe** because bacteria grow in meat, and they grow rapidly when the food is out at room temperature. Food left for two hours or more at room temperature is sure to contain a lot of bacteria. Food left out overnight can be very dangerous.
2. **Safe** because bacteria grow very slowly in foods kept cold in the refrigerator.
3. **Unsafe** because food put on the heater will be at the perfect temperature for bacteria to grow. Plus, bacteria grow well in meat and re-fried beans.
4. **Safe** because the frozen sandwiches thaw gradually over the morning. They stay cool enough that by lunch they have not been at room temperature for the critical two hours.
5. **Unsafe** because by the time school is out, the milk will be warm enough for bacteria to grow.
6. **Unsafe** because bacteria grow in re-fried beans, and they grow rapidly when the food is out at room temperature.

Teacher information sheet 2 Answer Key

Bag The Best:

1. What foods did you select as the safest for a brown bag lunch and what was your reason?

Beverage: *lemonade*, most acidic; fruit punch and peach nectar also would be safest if in juice box pack.

Sandwich: *peanut butter*, low moisture, high fat.

Snack: *yogurt*, most acidic and commercial yogurt is pasteurized.

Further protected by the packaging, assuming it has not been opened before eating.

Fruit: *raisins*, very low moisture content. Also, uncut apple or peach or unpeeled banana would be safe.

2. What can happen to foods if they are not refrigerated between preparation and eating time?

Microorganisms that cause food poisoning will grow in foods that are not refrigerated.

3. List common lunch/picnic foods that might cause food poisoning.

Potato/macaroni salad, cooked chicken or other meats, creamy desserts.

4. List common lunch/picnic foods that are unlikely to cause food poisoning.

Raw fruits and vegetables, cheese, bread, peanut butter, fruit juices.

5. How should you select foods for a brown bag lunch that will not be refrigerated?

Select foods that:

** have a low moisture content*

** are acidic*

Avoid meats, cooked foods, and milk.

Put something cold in the bag, such as frozen juice or your sandwich frozen overnight.

Teacher information sheet 3 Answer Key**Using The Facts**

Pretend you are packing a lunch that will not be refrigerated until you eat it four hours later. For each group of foods, mark the **safest** choice with a #1, the safe choice with a #2, and the **unsafe** choice with a #3. There are two safe choices and one unsafe choice in each group.

___ 3 ___ cold turkey sandwich packed without a freezer pack

___ 2 ___ cold turkey sandwich packed with a freezer pack

___ 1 ___ frozen turkey sandwich packed with a freezer pack

___ 2 ___ cold carton of yogurt packed with a freezer pack

___ 1 ___ frozen carton of yogurt packed with a freezer pack

___ 3 ___ cold carton of yogurt packed without a freezer pack

___ 3 ___ cheese slices packed with a juice box

___ 2 ___ cheese slices packed with frozen juice box

___ 1 ___ cheese slices packed next to a frozen juice box

Teacher information sheet 4 Answer Key

Don't Feed The Enemy

Food Item	Safe or unsafe	If unsafe, why is it unsafe?	How to store to make safe, or alternate food
Lemonade	S		thermos
Raisins	S		Dry box or bag
Milk	U	High protein and moisture, high pH	Very well chilled in thermos. Sealed container in cooler.
Peanut butter	S		Wrap sandwich
Banana bread/fresh	S		Wrapped
Sliced apples	S	Safe but turns brown	Whole or dipped in lemon
Pudding with milk	U	High protein and moisture	Sealed container in cooler
Jello	S	Safe, but may melt	Sealed container in cooler
Cottage cheese	U	High protein and moisture	Sealed container in cooler
Egg salad	U	High protein and moisture, high pH	Sealed container in cooler
Bean burrito	U	High protein and moisture	Wrapped in a cooler
Sliced ham	S	High protein, but cured meat is ok	Wrapped tightly, best in cooler
Mayonnaise	S		Wrap or put food in container
Mustard	S		Wrap or put food in container
Cut raw vegetables	S		Bagged
Yogurt	S	Safe for 3-4 hours	Sealed container, best in cooler
Cream cheese	U	High protein and moisture	Wrapped in a cooler
Dried salami	S		Wrapped
Cheese	S	High protein, but low moisture, may "weep"	Wrapped, best in cooler

Teacher information sheet 5

Name _____

Class/Period _____

Date _____

Evaluation for NIE Activity: Food Safety in Bag Lunches Poster

Grade the poster on the following criteria using the 0-4 rating scale. Four is the highest rate and zero is the lowest rate. Write comments in the boxes under the rating for each criterion.

Criteria	4	3	2	1	0
Content: Information is correct, complete, and useful.					
Neatness: Clean, organized, and not sloppy.					
Spelling: All words spelled correctly.					
Handed in on time: Handed in on due date. A point is deducted for each day late.					
Time Management: Time used wisely and working on project at allotted time.					

Quiz 18**Unit: Home****Lessons: Bag Lunch and Picnic Safety**

Name _____

Class/Period _____

Date _____

Short answer and fill in the blank: Write short answers or fill in the blank to the following questions and statements. Use complete sentences when answering questions.

1. List the four “Fight BAC” principles.
 - a.
 - b.
 - c.
 - d.

2. Name four foods that can safely be packed for a bag or picnic lunch without a cold source or freezer pack.
 - a.

 - b.

 - c.

 - d.

3. Describe two types of freezer packs.
 - a.

 - b.

4. Which “Fight BAC” principle is important for bag lunch and picnic safety?

Quiz 18 Key

Unit: Home

Lessons: Bag Lunch and Picnic Safety

Short answer and fill in the blank: Write short answers or fill in the blank to the following questions and statements. Use complete sentences when answering questions.

1. List the four “Fight BAC” principles.
 - a. *Clean: Wash hands and surfaces often*
 - b. *Separate: Don’t contaminate*
 - c. *Cook: Cook to proper temperatures*
 - d. *Chill: Refrigerate promptly*

2. Name four foods that can safely be packed for a bag or picnic lunch without a cold source or freezer pack.
 - a. *peanut butter sandwich*
 - b. *apple or banana*
 - c. *cut raw vegetables*
 - d. *raisins*
 - e. *dried cereal*
 - f. *crackers*
 - g. *bread*

3. Describe two types of freezer packs.
 - a. *Commercial gel-filled pack*
 - b. *Ice in a leak-proof plastic container*
 - c. *Leak-proof plastic container filled with water and frozen*
 - d. *Ice cubes placed in a plastic bag, bag wrapped in foil*
 - e. *Frozen juice pack, yogurt, or applesauce: they will stay cold and thaw by lunch time.*
 - f. *Sandwich frozen overnight (the sandwich cannot be used to keep other food cold)*

4. Which “Fight BAC” principle is important for bag lunch and picnic safety?
 - a. *Chill: Refrigerate promptly*

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