

Introduction • Lesson 4

Food Safety Teamwork

Class periods: two - three 30-min. class periods

Supplement section: Introduction PA PAS for FCS: 9.3.6, 9.3.12.

National Education Standards: FCS 8.2.3, 9.2.3; LA 2.

LESSON SUMMARY

Students will learn about the different food safety team members, their roles in the food safety cycle, and how they work together to keep our food safe.

Objectives

The students will be able to:

- Identify the members of the food safety team.
- Associate the food safety team members with their roles and responsibilities.
- Describe how team members work together to keep our food safe.

Materials Provided

Overhead:

1. Baseball Diamond

Worksheet:

1. NIE Activity: Food Safety Team Member Role in Keeping Pizza Ingredients Safe

Teacher Information Sheets:

1. America's Food Safety Team: A Look at the Lineup
- 2.a-f. Food Safety Team Member (poster/ bulletin board masters)
3. Food Safety Team Member fact sheet
4. What Team Members Should Do
5. Evaluation for NIE newspaper activity: Food Safety Team Member Role in Keeping Pizza Ingredients Safe

Suggested Presentation Aids

- Overhead Projector: provided by instructor
- Food Safety Team Member poster master (names of Food Safety Team members). Cut the names into strips so that each can be used as a heading on the bulletin board.
- Envelopes for What Team Members Should Do game: provided by instructor

LESSON PLAN

Class Period 1

Introduction

Each member on the food safety team works together to make our food safe to eat. Organization is a key factor for all team members to accomplish their goals on the food safety team. (Teacher information sheet 1: America's Food Safety Team: A Look at the Lineup)

Lesson Sequence

- Put the baseball diamond transparency (Overhead 1) on the overhead projector. Ask students to identify the members of the baseball team. What is each member responsible for? Record answers on the transparency. (Pitcher, catcher, outfielders, 1st, 2nd, and 3rd basemen, shortstop, coach, and manager)
- Who are the other people that play an important role on the team? (Batboy, umpire, baseball commissioner [rules and regulations of the game])
- Discuss the idea that everyone has a job and if someone doesn't do his or her job the team loses. What would be the consequences if one of the team members didn't follow the rules? What would happen if you didn't have rules to follow? Who would win? (Team would lose, more mistakes made, team members could not do their job correctly, the game would be chaotic, the goals would be unclear)
- The food safety team can be compared to the baseball team. All the team members depend on one another. Everyone has a job to do and must follow the rules to achieve success. Everyone must follow through with his or her responsibilities if the goal of safe food is to be achieved.
- Present the members of the Food Safety Team. Have five student volunteers tack the names of the Food Safety Team (Teacher information sheets 2A-2F) onto

the bulletin board as headings (Farmers, Processors, Grocery and Retail, Restaurant and Institutional, Consumers, and Government Officials).

- Students will cut out pictures from newspapers or magazines to illustrate the members of the Food Safety Team. Tack the pictures onto the bulletin board. (This can also be a homework assignment.)
- Using the Food Safety Team Member fact sheet (Teacher information sheet 3), summarize the role of each team member in food production and consumption.
- Farmers: people who raise both crops and animals.
- Processors: includes factories where animals are slaughtered and made into meat products, factories where meat and other food products are made, canned, frozen, or just packaged in some way.
- Grocery and Retail: sell food to the consumer in a retail or wholesale store or market.
- Restaurant and Institutional: includes restaurants, fast food places, nursing homes, cafeterias, food service for airlines and hospitals who prepare, serve, and sell food to the consumer.
- Consumers: includes anyone who buys food to eat.
- Government Officials: includes all the agencies that make or enforce the rules and regulations that everyone must follow, such as HACCP (Hazard Analysis and Critical Control Points), like FDA (Food and Drug Administration), and USDA (United States Department of Agriculture).

Closure class period 1

- Give examples of Food Safety Team members, such as Grocery and Retail: local supermarket, farmer's market, Minit Market; Restaurant and Institutional: school cafeteria, McDonald's; Manufacturer: Frito Lay; Government Officials: FDA/USDA; Farmer: name of a local farmer or family member; and consumers: Mom, Dad, Grandmother, you, me, etc.

Class Period 2

- Divide the class into five groups. Give each group an envelope containing names and tasks of each Food Safety Team member. Follow the instructions for the game “What Team Members Should Do” (Teacher information sheet 4) in the Learning Activity section of the lesson.

Closure class period 2

- NIE newspaper homework assignment (Worksheet 1 and Teacher information sheet 5): Ask the class to list all the ingredients that go into a pizza (pizza dough, tomato sauce, cheese, pepperoni, mushrooms, pepper and onions, ground beef, sausage). Assign one ingredient to each group of three to four students. Cut out pictures of each pizza ingredient from the newspaper. Their assignment is to give a report on how each member of the Food Safety Team (farmer, processor, grocery store retailer, restaurant and institutional retailer, consumer, and government official) is involved in making sure that ingredient is safe.

Class Period 3

- Students will report on how each member of the Food Safety Team is involved in making sure each pizza ingredient is safe.

Closure class period 3

- Consider these questions: Who should be responsible for keeping food safe from bacterial contamination? Should some of the Food Safety Team members be more responsible for food safety than others? Should consumers be responsible for protecting themselves from food safety hazards? Consider the consequences of each question.

Suggested Learning Activity

- What Team Members Should Do game (Teacher information sheet 4). Divide the class into five teams. Give each team an envelope containing the Food Team Members printed on slips of paper, the tasks they perform, and blank index cards. Each team needs to select a reporter to give information to the class at the end of the game. Each team has five minutes to sort out the tasks performed by each Food Safety Team member. Match the task to the team member. Each team will write one or two additional tasks that each Food Safety Team member performs on the blank index card. Each team reporter will give the results of the activity and share the additional responsibilities of each Food Safety Team member with the class. Each team will tack one Food Safety Team task on the bulletin board under the appropriate Food Safety Team.

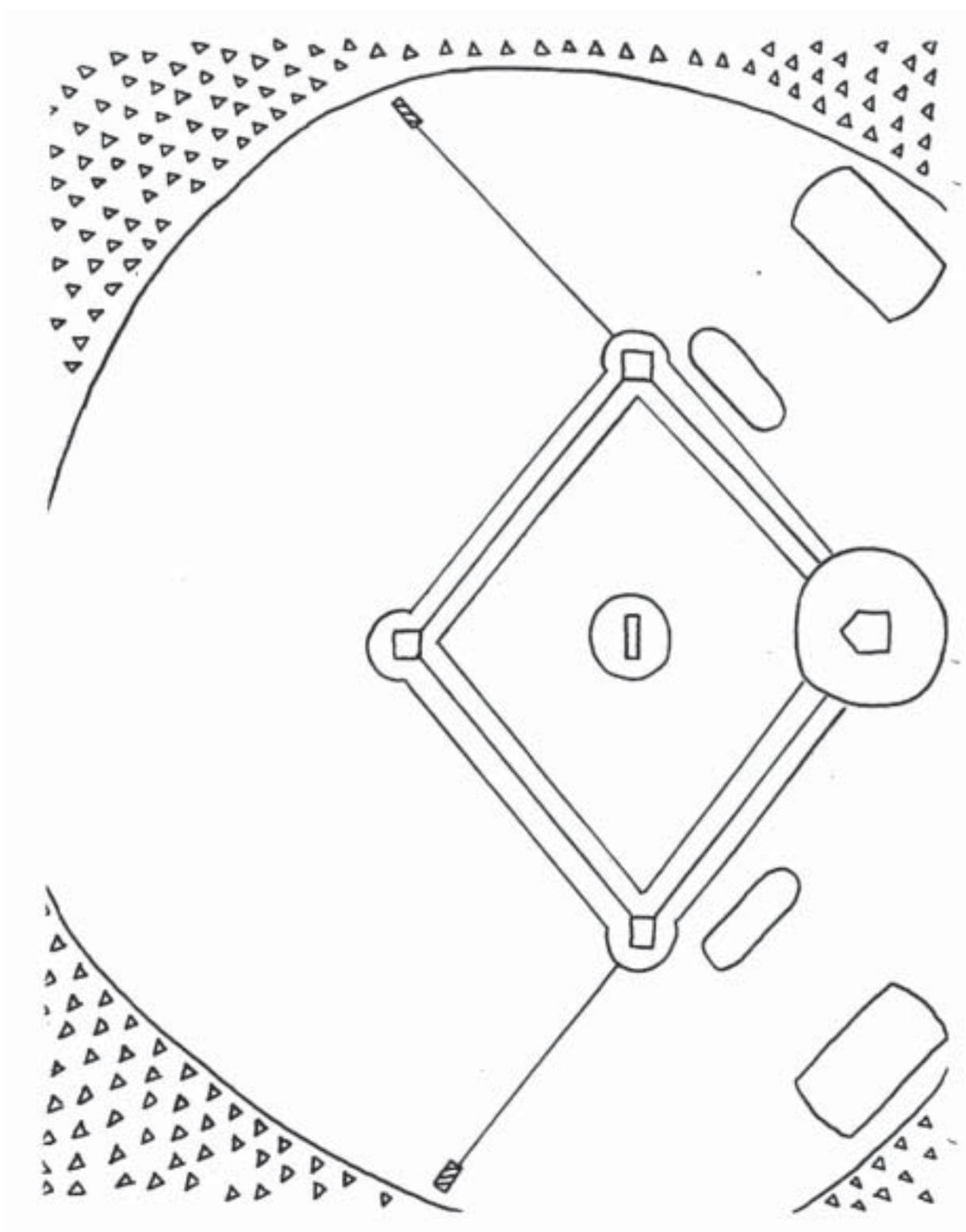
Evaluation

- Reports given by each group for the What Should Team Members Do game
- NIE Activity reports given to the class on how each member of the Food Safety Team is involved in making sure that each pizza ingredient is safe
- Quiz #4
- Examination #1 at the end of the Introduction unit.

References

- Producer Through Consumer: Partners to a Safe Food Supply. Purdue University Cooperative Extension Service, 1992.
- Bacterial Contamination of Food. The Pennsylvania State University Cooperative Extension. Lesson #7. Unit one in the Fast Plants, Fast Food- How Safe? School enrichment unit series.

Overhead 1



Worksheet 1

Name _____

Class/Period _____

Date _____

NIE Newspaper Activity**Food Safety Team Member Role in Keeping Pizza Ingredients Safe**

Write in the box under each team member category how each Food Safety Team Member is involved in making sure each pizza ingredient is safe.

Pizza Ingredient	Farmer	Processor	Government Official
Crust			
Tomato Sauce			
Cheese			
Ground Beef			
Vegetables			

Pizza Ingredient	Grocery & Retail	Restaurant & Institutional	Consumer
Crust			
Tomato Sauce			
Cheese			
Ground Beef			
Vegetables			

Teacher Information Sheet 1

America's Food Safety Team: A Look at the Lineup

So there's a bug in your Brie. Understandably, you feel like telling someone, since the label didn't say anything about bugs. But who can help? Is it a wild bug or a domestic one? Does it swim? Was the Brie homemade or imported? Did the others at your party also get a bug in their Brie or were you the only lucky one? Is eating bugs good for you? Who's in charge here?

Responsibility for monitoring and regulating the origin, composition, quality, safety, weight, labeling, packaging, marketing and distribution of the food you eat and drink is shared by local, state, national and international government agencies. On these pages are condensed descriptions of the principal ones involved and a brief explanation of their roles and relationships.

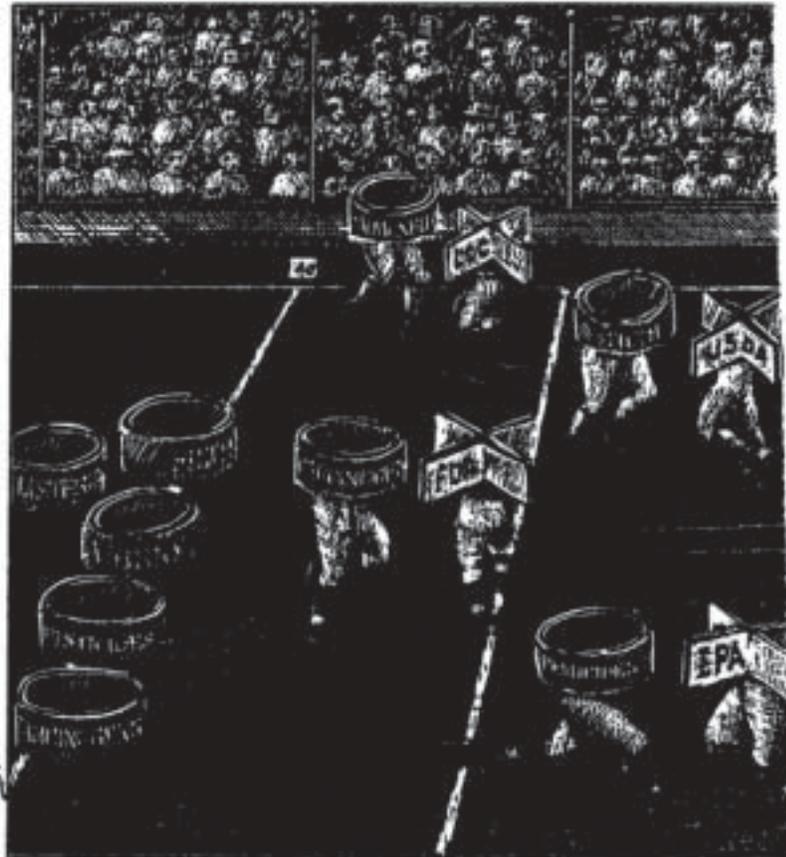
U.S. Department of Agriculture (USDA)

Through inspection and grading, the U.S. Department of Agriculture enforces standards for wholesomeness and quality of meat, poultry and eggs produced in the United States. USDA also is involved in nutrition research and in educating the public about how to choose and cook foods and how to manage healthy or restricted diets.

USDA food safety activities include inspecting poultry, eggs, and domestic and imported meat; inspecting livestock and production plants; and making quality (grading) inspections for grain, fruits, vegetables, meat, poultry and dairy products (including Brie and other cheeses). USDA's education programs target family nutritional needs, food safety, and expanding scientific knowledge. The department supports education with grants in food and agricultural sciences and conducts its own and cooperative food research.

Bureau of Alcohol, Tobacco and Firearms (ATF)

ATF, an agency of the Department of the Treasury, is responsible for enforcing the laws that cover the production, distribution and labeling of alcoholic beverages, except wine beverages that contain less than 7 percent alcohol, which are the responsibility of FDA. ATF and FDA sometimes share responsibility in cases of adulteration, or when an alcoholic beverage



contains food or color additives, pesticides or contaminants.

Centers for Disease Control (CDC)

A branch of the Department of Health and Human Services, CDC becomes involved as a protector of food safety, including responding to emergencies, when food-borne diseases are a factor. CDC surveys and studies environmental health problems. It directs and enforces quarantines, and it administers national programs for prevention and control of vector-borne diseases (diseases transmitted by a host organism) and other preventable conditions.

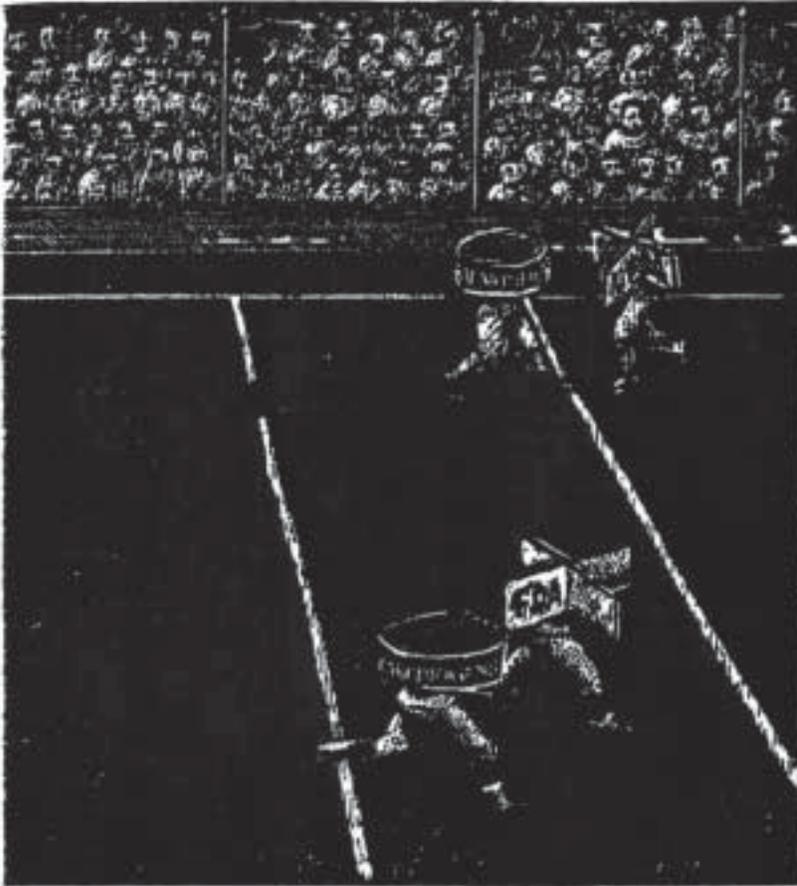
Department of Justice

When the problem with a food is a violation of federal law, marshals from the Department of Justice are the agents who seize products. The Justice Department's attorneys take suspected violators of food safety laws to court.

Environmental Protection Agency (EPA)

Among its many duties, EPA regulates pesticides. It determines the safety of new pesticide products, sets tolerance levels for pesticide residues in foods, which FDA enforces, and it publishes directions for the safe use of pesticides.

EPA also establishes water quality standards, including the chemical content of drinking water. These standards are used



by FDA as guides in its regulation of bottled water sold in interstate commerce for human use.

Federal Trade Commission (FTC)

FTC's Bureau of Consumer Protection has, among its duties, the regulation of advertising of foods.

Food and Drug Administration (FDA)

FDA, a part of the Department of Health and Human Services' Public Health Service, is responsible for ensuring the safety and wholesomeness of all foods sold in interstate commerce except for meat, poultry and eggs, all of which are under USDA jurisdiction.

FDA develops standards for the compo-

sition, quality, nutrition and safety of foods, including food and color additives. It does research to improve detection and prevention of food contamination. It collects and interprets data on nutrition, food additives and environmental factors, such as pesticides, that affect foods. FDA also sets standards for certain foods and enforces federal regulations on labeling, food and color additives, food sanitation, and safety of foods.

FDA inspects food plants, imported food products, and feed mills that make feeds containing medications or nutritional supplements for animals destined as food for humans. FDA monitors recalls of unsafe or contaminated foods and can get illegally marketed foods seized.

National Marine Fisheries Service (NMFS)

A part of the Department of Commerce NMFS is responsible for seafood quality and identification, fisheries management and development, habitat conservation, and aquaculture production. NMFS has a voluntary inspection program for fish products. Its guidelines closely match regulations for which FDA has enforcement authority.

State and Local Governments

State and local government agencies cooperate with the federal government to ensure the quality and safety of food produced within their jurisdictions. FDA and other federal agencies help states and local governments develop uniform food safety standards and regulations, and assist them with research and information.

States inspect restaurants, retail food establishments, dairies, grain mills, and other food establishments within their borders. In many instances, they can embargo illegal food products, which FDA cannot do. States "own" fishing waters within their jurisdictions, which gives them authority over fish, including shellfish, taken from those waters. FDA provides guidelines to the states for this regulation. Twenty-eight states have their own fish inspection programs.

FDA also provides guidelines for state and local governments for regulation of dairy products and restaurant foods.

The departments responsible for food safety and inspection functions vary by state and community. Some are divisions of other agencies such as state agriculture or health departments.

Foreign Governments

Governments of at least 40 nations are now partners with the United States in ensuring food safety through memoranda of understanding that cover some two dozen food products, including shellfish. International cooperation is expanding in areas of food product inspection, certification, quality assurance, education and training, product studies, and regulatory standards. ■

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Teacher Information Sheet 2A

Farmer



Teacher Information Sheet 2B

Consumer



Teacher Information Sheet 2C

Government Officials



Teacher Information Sheet 2D

Grocery Store Retailers



Teacher Information Sheet 2E

Processors



Teacher Information Sheet 2F

Restaurants and Institutions



Teacher Information Sheet 3

Food Safety Team Member Fact Sheet

Government Agencies:

- Make the rules and regulations concerning food safety and make sure that everyone follows them.
- Four major government agencies regulate food safety.

EPA- Environmental Protection Agency

- Sets the amount of pesticides that can be used by farmers
- Sets water quality standards

FDA- Food and Drug Administration

- Inspects food processing plants
- Enforces labeling, additive, sanitation, and pesticide regulations
- Develops standards for the use of food additives

USDA- United States Department of Agriculture

- Inspects meat, poultry, and egg products and the plants that process them

State Board of Health

- Inspects food processing plants, grocery stores, and all places that serve food
- Enforces labeling, additive, sanitation, and pesticide regulations
- Some states may set additional food safety standards

Farmers:

- Use safe and modern methods to raise animals or grow crops
- Follow strict rules on how to apply chemicals that help eliminate or remove mold, mildew, bacteria, weeds, and disease from plants to give the consumer a high quality product

- Administer drugs to their animals to keep them free from disease
- Keep barn and all facilities clean so animals will not get sick
- Keep rodents, insects, and wild fowl from the animals and their food supplies
- Clean equipment regularly, such as milking machines or egg holders
- Make sure workers follow safe hygiene practices

Processors:

- Process plants, animals, and other food products (heat, chill, freeze, can, or repackage meat, poultry, seafood, fruits and vegetables, and grains)
- Use food additives to prevent spoilage and/or improve the taste, texture, appearance, or freshness of foods (the use of these additives is monitored by the government agencies)
- Inspect all raw materials and food processing equipment
- Keep factories clean and store packages properly
- Follow good manufacturing practices
- Control temperatures throughout all stages of processing

Grocery Store Retailers:

- Sell food to the consumer
- Train personnel in safe food handling and storage procedures (keep cold foods cold, frozen foods frozen, hot foods hot)
- Check their displays continually to make sure food items are not too old or otherwise unfit to sell (rotate stock)
- Check for cracked jars, bulging cans, and any sealed product that has been opened

- Check for decay or mold and freshness dates on items like meat, seafood, produce, and dairy products
- Rotate stock regularly so foods are moved off the shelf by their sell dates
- Maintain foods at appropriate temperatures; monitor frozen food and refrigerator cases for consistent temperatures
- Put Safe Handling Instructions labels on packages

Restaurant and Institutional:

- Place sneeze covers over salad bars and dessert bars
- Make sure that all food sold is prepared under clean conditions
- Make sure that food servers wash their hands before serving food and follow general rules of sanitation
- Make sure food is cooked to appropriate temperatures
- See that workers who handle food do not handle money
- Store food properly before use in cooking
- Routinely scrub and sanitize counter tops, equipment, and floors

Consumers:

- Practice safe food purchasing by avoiding any products that have been opened, noting freshness dates (“use by,” “sell by”) and making sure that cans are not dented, rusty, or bulging
- Store food products in the proper location at home (refrigerator, freezer, or cabinet)
- Make sure the refrigerator and freezer are operating at the correct storage temperatures
- Wash hands often, prepare food on clean surfaces, and keep equipment clean
- Separate: Don’t contaminate
- Put leftovers away immediately after a meal, refrigerate promptly
- Cook foods to proper temperatures

*Adopted from Producer Through Consumer: Partners To a Safe Food Supply
Purdue University Cooperative Extension Service*

Teacher information sheet 4

WHAT TEAM MEMBERS SHOULD DO

Government Agencies

Make food safety rules and regulations

Inspect food processing plants

Inspect grocery stores and all places that serve food

Set the amount of pesticides that can be used by farmers

Enforce food safety regulations

Identifies where potential contamination can occur and strictly manage and monitor these points to ensure the process is controlled and to produce the safest product

Farmers

Apply chemicals according to strict rules when growing crops

Give drugs in safe amounts to animals to help keep them disease free

Maintain a clean living environment for animals

Raise animals for food

Grow crops for food

Keep rodents, insects, and wild fowl away from the animals and their food supplies

Clean equipment regularly, such as milking machines or egg holders

Make sure workers follow safe hygiene practices

Processors

Prepare and package food

Keep factories clean

Use food additives to preserve food

Maintain cleanliness when processing food moved off the shelf by their sell dates

Inspect raw materials and processing materials

Control temperatures throughout all stages of processing

Grocery and Retail

Make sure cracked jars and bulging cans are not sold

Train personnel in safe food handling

Maintain foods at appropriate temperatures; monitor frozen food and refrigerator cases for consistent temperatures

Rotate stock regularly so foods are

Clean and sterilize all surfaces that hold food

Put Safe Handling Instructions labels on packages

Consumers

Buy and prepare food for family and friends and dessert bars

Check the “sell by” freshness dates on food products before buying them

Refrigerate or freeze cold food immediately after purchasing and/or preparing it

Wash fruits and vegetables before eating

Prepare foods on clean surfaces

Always wash hands before preparing food

Cook foods thoroughly, check internal temperature

Store foods in small, shallow containers and refrigerate quickly

Separate: Don't contaminate

Restaurant and Institutional

Place sneeze covers over salad bars

Make sure that all food sold is prepared under clean conditions

Make sure that food servers wash their hands before serving food and follow general rules of sanitation

Make sure food is cooked to appropriate temperatures

Workers who handle food do not handle money

Dispose of garbage properly and keep dumpsites clean.

Store food properly before use in cooking

Routinely scrub and sanitize counter tops, equipment and floors

Teacher information sheet 5

Name _____

Class/Period _____

Date _____

Evaluation of NIE Newspaper Activity

Food Safety Team Member Role in Keeping Pizza Ingredients Safe

Grade the NIE activity 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					

Quiz 4**Unit: Introduction****Lesson: Food Safety Teamwork**

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. After looking at the baseball diamond overhead, choose one of the positions of the Food Safety Team and list at least two responsibilities of that team member.

2. What would happen if one of the Food Safety Team members did not do their job?

3. What would happen if the Food Safety Team did not have rules to follow?

4. Match the Food Safety Team member with the category below.

Food Safety Team Member	Example
_____ 1. Government Official	A. Campbell's
_____ 2. Farmer	B. Red Lobster
_____ 3. Consumer	C. Supermarket
_____ 4. Grocery and Retail	D. Old MacDonald
_____ 5. Processor	E. You, me, Mom, Dad, Grandma, etc.
_____ 6. Restaurant and Institutional	F. FDA, USDA

Quiz 4 Key

Unit: Introduction

Lesson: Food Safety Teamwork

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. After looking at the baseball diamond overhead, choose one of the positions of the Food Safety Team and list at least two responsibilities of that team member.

Farmer

Raise animals and crops for food.

Apply chemicals according to strict rules when growing crops.

Give drugs in safe amounts to animals.

Maintain a clean living environment for animals.

Keep rodents, insects, and wild fowl away from the animals and their food supplies.

Clean equipment regularly.

Make sure workers follow safe hygiene practices.

Processor

Prepare and package food.

Keep factories clean.

Use food additives to preserve food.

Maintain cleanliness when processing food.

Inspect raw materials and processing materials.

Control temperatures throughout all stages of processing.

Grocery and Retail

Make sure cracked jars and bulging cans are not sold.

Train personnel in safe food handling.

Maintain foods at appropriate temperatures; monitor frozen food and refrigerator cases for consistent temperatures.

Rotate stock regularly so foods are moved off the shelf by their sell dates.

Clean and sterilize all surfaces that hold food.

Put Safe Handling Instructions labels on packages.

Restaurant and Institution

Place sneeze covers over salad bars and dessert bars.

Make sure that all food sold is prepared under clean conditions.

Make sure that food servers wash their hands before serving food and follow general rules of sanitation.

Make sure food is cooked to appropriate temperatures.

See that workers who handle food do not handle money.

Dispose of garbage properly and keep dumpsites clean.

Store food properly before use in cooking.

Routinely scrub and sanitize counter tops, equipment, and floors.

Consumer

Separate: Don't contaminate.

Buy and prepare food for family and friends.

Check the "sell by" freshness dates on food products before buying them.

Refrigerate or freeze cold food immediately after purchasing and/or preparing it.

Wash fruits and vegetables before eating.

Prepare foods on clean surfaces.

Always wash hands before preparing food.

Cook foods thoroughly, check internal temperature.

Store foods in small, shallow containers and refrigerate quickly.

Government Official

Make food safety rules and regulations.

Inspect food processing plants.

Inspect grocery stores and all places that serve food.

Set the amount of pesticides that can be used by farmers.

Enforce food safety regulations.

Identify where potential contamination can occur and strictly manage and monitor these points to ensure the process is controlled and to produce the safest product.

2. What would happen if one of the Food Safety Team members did not do their job?

Team would lose, more mistakes would be made, and each team member could not do their job correctly.

3. What would happen if the Food Safety Team did not have rules to follow?

The "game" would be chaotic and the goals would be unclear.

4. Match the Food Safety Team member with the category below.

Food Safety Team Member	Example
<u>F</u> 1. Government Official	A. Campbell's
<u>D</u> 2. Farmer	B. Red Lobster
<u>E</u> 3. Consumer	C. Supermarket
<u>C</u> 4. Grocery and Retail	D. Old MacDonald
<u>A</u> 5. Processor	E. You, me, Mom, Dad, Grandma, etc.
<u>B</u> 6. Restaurant and Institutional	F. FDA, USDA

PENNSTATE



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