

## Kitchen Inspection Exercise

### Purpose

Students will:

- Perform a mock Department of Health Inspection of a food preparation facility
- Identify sources of Food Borne Illness and their prevention particularly related to food storage and preparation
- Become acquainted with **Hazard Analysis and Critical Control Point System (HACCP)** concepts
- Evaluate tools used by public health professionals

### Overview

Students are asked to use a Dept of Health Inspection Form to evaluate a kitchen/food preparation facility as individuals or in teams. In addition, students are asked to research prevention of food borne illness during food storage and food preparation including the **Hazard Analysis and Critical Control Point System (HACCP) concepts**.

### Time

3 two hour block class periods with team homework in between; the first session is to start the students in preparing for the kitchen inspection as well as beginning research on prevention of foodborne illness particularly during food storage and food preparation, the second is to perform the kitchen inspection using the enclosed checklist, and the third is to present and discuss their findings. This experience should involve time in and out of the classroom to collect, organize, and create the Team Presentations.

### Key Concepts

This section emphasizes research into prevention of foodborne prevention of food borne illness during food storage and food preparation including the **Hazard Analysis and Critical Control Point System (HACCP) concepts** as well as public health evaluation of risk. Additional concepts are written summary of the inspection findings with verbal presentation, and team work.

### Skills

Students will:

- work in teams (although this can be done as individuals)
- utilize research tools for exploring causes of foodborne illness
- Investigate a real life food preparation facility
- Summarize their findings in written and verbal format
- practice public speaking to present their work.

### Materials

A transparency projector or slide or LCD projector for presentation of transparencies, slides or computerized PowerPoint presentation. Access to internet and/or library facilities for research

would also be useful.

## Facilitator Preparation

You will need to divide the students into groups or teams (although this can be done as individuals). Knowledge of and facilitating access to the computerized software with training will optimize this session. Prior knowledge of the Food/Foodborne Illness Primer, as well as other modules, will prepare you for the range of issues addressed in this section.

Prior to data collection, the facilitators should meet with each group to evaluate their progress in collecting information and deciding on formulating a spreadsheet as well as formulating and substantiating hypotheses. If formal presentations are made, facilitators should encourage the groups to practice their presentations before and keep to the time limits.

If the Kitchen Inspection is to take place at the school facility, the teacher should meet with administration in advance to pave the way for the students.

## Background

See Foodborne illness and HACCP guidelines in teacher primer.

While many public opinion studies report that consumers are concerned primarily about chemical residues, such as from pesticides and antibiotics, these hazards are nearly non-existent. The more significant hazards facing the food industry today are microbiological contaminants, such as *Salmonella*, *E. coli* O157:H7, *Listeria*, *Campylobacter*, and *Clostridium botulinum*. HACCP is designed to focus on and control the most significant hazards.

HACCP stands for Hazard Analysis and Critical Control Point System. It is a system for the prevention of safety problems in food products. It was developed in the 1960s for NASA by the Pillsbury Company as a way to ensure greater safety for the food products used in the Manned Space Program.

The advantages of HACCP include:

- Enhanced public health
- Control over the occurrence of potential hazards in the food supply
- Increased consumer confidence in the safety of the food supply
- Better oversight and use of resources by governing parties

**Kitchen Inspection – “A Classroom Concern” – If planning to do a kitchen inspection at a school cafeteria, be sure to get permission from the appropriate authorities and make plans in advance. There is also a danger that students who find food safety problems may not want to eat cafeteria food again as a result. In ethical terms this is called an “unintended harm” to the cafeteria, its staff, and the students. This issue should be discussed beforehand. All kitchens, (especially home kitchens!) have potential food hazards. Relatively few people get sick from food. The goal is to identify possible problems and their solutions, and to see how industrial kitchens are set up to avoid hazards with proper use and training. Do your own pre-assessment of the kitchen to be toured. If it is really gross, maybe find an alternate location (perhaps a local restaurant) or give the staff a “heads up” about your coming “student inspection.”**

## Procedure

In groups or as individuals, have the students perform

- Research through internet and/or library on research into prevention of foodborne prevention of food borne illness during food storage and food preparation including the **Hazard Analysis and Critical Control Point System (HACCP) concepts**
- A brief essay and/or oral presentation can be prepared addressing all or some of the following questions
  - What are the major causes of foodborne illness?
  - What are ways to prevent foodborne illness particularly during food storage and preparation?
  - What is HACCP?
  - What are the advantages of HACCP?
  - How does HACCP prevent Foodborne illness?
- Have the students review the enclosed Kitchen Inspection Form
  - They can modify this Form if they wish although they should discuss why they have made these modifications
- Have the students identify a kitchen or food preparation facility that they will visit to administer this form (this could be school facility, restaurant or even their own homes)
- Discuss their plans for this visit (including logistics and issues of courtesy)
- Have them perform the Kitchen Inspection in teams or as individuals
  - If appropriate, urge the students to take pictures of the inspection to augment their presentation
- A brief essay and/or oral presentation can be prepared summarizing the results of their inspection

## Additional Activities

If the students haven't done so already, have them use the Kitchen Inspection form on their own kitchens and discuss the results with their family, then report back on the results

Have the students create a list of recommendations for improving the food preparation facilities that they inspected, and communicate these recommendations to the food preparation site.

Some HACCP Web Sites:

- Center for Food Safety and Applied Nutrition
  - <http://vm.cfsan.fda.gov>
    - under Program Areas titled "HACCP Hazard Analysis and Critical Control Point"
- USDA and FDA HACCP Database
  - <http://www.nal.usda.gov/fnic/foodborne/haccp/index.shtml>
    - HACCP Training Programs and Resource Database

## Follow Up Activities

Invite a Dept of Health Environmental Inspector to class to discuss kitchen inspections; if possible, have students arrange to attend a Kitchen Inspection with a Dept of Health Environmental Inspector.

Have the students research the public health laws concerning the prevention of foodborne illness and licensing of food establishments.

## Student Assessment

Give the following components to each student team as a guide:

- ❖ Seek data on the into prevention of foodborne prevention of food borne illness during food storage and food preparation including the **Hazard Analysis and Critical Control Point System (HACCP) concepts**
- ❖ Prepare a brief essay and/or oral presentation summarizing the findings
- ❖ Perform Kitchen Inspection using enclosed Kitchen Inspection Form
- ❖ Prepare a brief essay and/or oral presentation summarizing the findings
- ❖ Each group member should take part in the Presentation, even if it is just to read or explain one piece of the presentation
- ❖ Each group member should answer at least one question from the audience at the end of their Group presentation.

Assign points for the following components of the Team Project:

- ❖ Were data (research and Kitchen Inspection) collected by all members of the Team?
- ❖ Were data correctly summarized in essay and/or oral format?
- ❖ Were proper science terms used?
- ❖ Was each group member actively involved in the presentation?
- ❖ Did the group report their sources?
- ❖ Could the group members answer questions from the audience about the facts and defend their point of view?

Use the following inspection form for your school cafeteria, home kitchen, or local restaurant. Check off all violations.

### 1. FOOD PREPARATION AREA

Temperature Monitoring of Potentially Hazardous Foods (sanitize thermometer)

- food holding temperatures (60°F-125°F)
- food holding temperatures (42°F-59°F/126-139°F)
- holding pooling shelled eggs in danger zone
- internal cooking temperatures not reached or verified
- improper reheating method
- inadequate rapid cooling practices
- lack of a probe thermometer to measure food temperatures

Food Preparation

- food not under diligent preparation
- improper thawing of PHF
- refreezing thawed PHF
- cross contamination of food-contact surfaces
- food prepared in an unapproved area
- food prepared with bare hands, where utensils or gloves should be used
- food prepared at home or not from an approved source
- food adulterated/spoiled
- not storing wiping rag in sanitizing solution when used more than once

### 2. EMPLOYEE PRACTICES

Hand Washing

- employee did not wash hands as required
- handwashing sink lacks single-service soap, towels/hot air
- lack of hot/cold water
- employee using soiled wiping rag for handwashing
- no handwashing sign posted

Personal Practices/Hygiene

- employee with a communicable disease is preparing food
- employee observed eating/drinking/ smoking in the food preparation area
- employee observed wearing soiled clothes and/or lacking hair restraints
- employee with open wound observed contacting food and food-contact surfaces without wearing gloves.
- employee with artificial nails, nail polish, or dirty fingernails observed contacting food and food-contact surfaces without wearing gloves

### 3. REFRIGERATION & FREEZER UNITS

Food Storage

- raw meats/seafood/eggs stored above produce and ready-to-eat food products
- food items uncovered &/or not properly elevated

- food items stored in unapproved containers &/ or on unapproved shelving

Food Temperatures

- food holding temperatures (60°F-125°F)
- food holding temperatures (42°F-59°F)
- thermometer missing, broken, or inaccurate
- inadequate rapid cooling practices

Equipment Condition

- refrigeration units, fan guards not maintained clean
- unapproved food shelving
- rusted, deteriorated shelving
- unapproved type, improper use or improper installation
- lack of light shields
- refrigeration unit not draining to an approved device

Walls/Floors/Ceilings

- walls, ceilings, and floors not maintained clean
- walls, ceilings, and floors not approved

**4. PHYSICAL INSPECTION OF FOOD PREPARATION AREA**

Equipment/Utensils/Shelving/Cabinets

- not maintained clean or free of grease build-up
- in disrepair
- unapproved, improperly installed, improperly used
- stored in unapproved area
- liquid waste from equipment (steam table, etc.) not draining into a floor sink or other approved device

Walls / Ceilings / Floors

- not maintained clean
- deteriorated/unapproved materials/facility not fully enclosed
- unapproved or pitted floors or floors in disrepair

Ventilation

- hood not clean, disrepair, missing filters
- equipment not under hood, improper hood type
- lack of ventilation to facilitate reasonable comfort
- unapproved or inadequate exhaust system

Lighting/Light Shields

- missing light shields or shatterproof light bulbs, where required
- inadequate amount of lighting to clean or inspect

Vermin

- fresh rodent droppings or other evidence observed in the facility
- live cockroaches and evidence of cockroaches
- flies, food-infesting insects or other insects observed in the facility
- dog, bird, or fowl in facility
- air curtain in disrepair and not fully operable

- exterior doors gaps exceed 1/4"
- doors maintained open

Food Preparation Sink

- directly connected to drain line

**5. UTENSIL WASHING AND SANITIZING**

Sanitizing multi-use consumer utensils

- observed not washing and sanitizing consumer utensils, as required
- lack of mechanical or manual equipment to properly wash and sanitize multi-use utensils
- water heater booster not working properly
- improper method of manual dishwashing

Sanitizing kitchen utensils

- not properly sanitizing food-contact surfaces

Sanitizer

- lack of approved sanitizer on the premises
- sanitizing solution is at improper concentration
- sanitizing kit missing, incomplete or misused

Water

- lack of hot/cold water at all sinks
- lack of cold or hot water at one sink
- water temperature less than 120°F but greater than 110°F
- water temperature less than 110°F at all sinks

Plumbing / Fixtures / Drainage

- leaking, no water at faucet
- lack of backflow or back siphonage device at faucet where a hose is connected
- leaking P-trap, overflowing/clogged grease trap
- clogged floor sink, floor drain
- sewage overflow (contamination of food prep area)

Vermin

- fresh rodent droppings or other evidence observed in the facility
- live cockroaches and evidence of cockroaches
- flies, food infesting insects or other insects observed in the facility

**6. FOOD STORAGE AREA**

Food Storage

- food stored in unapproved area
- food stored in unclean environment
- food stored in opened/unlabeled containers
- damaged or returned food not stored in a separate area
- food not elevated at least 6"
- spoiled and adulterated food found in facility
- food from unapproved source
- shellfish tags not maintained as required

Equipment Condition

- unapproved food shelving
- not maintained clean

Ventilation

- lack of ventilation to facilitate proper storage

Vermin

- fresh rodent droppings or other evidence observed in the facility
- live cockroaches and evidence of cockroaches
- flies, food infesting insects or other insects observed in the facility

**7. UTENSIL STORAGE AREA**

Equipment/Utensil Condition

- not maintained clean
- unapproved, domestic-type utensils

Storage

- stored in unapproved area

Vermin

- fresh rodent droppings or other evidence observed in the facility
- live cockroaches and evidence of cockroaches
- flies, food-infesting insects or other insects observed in the facility

**8. FRONT SERVICE AREA**

Hot/Cold Holding Unit (e.g., steam table, salad bar)

- food holding temperatures (60°F-125°F)
- food holding temperatures (42°F-59°F/126-139°F)
- liquid waste from equipment (steam table, etc.) not draining into a floor sink or other approved device

Food Display

- food displayed without proper sneeze guards or approved dispensing devices
- prepackaged food items not properly labeled

Condiment/Table Service

- re-serving food after having been served to a customer
- reusing food previously served to a customer in the preparation of another food
- utensils not stored with handles up in customer area

Vermin

- fresh rodent droppings or other evidence observed in the facility
- live cockroaches and evidence of cockroaches
- flies, food-infesting insects or other insects observed in the facility

## 9. DELIVERY, TRANSPORTATION, & RECEIVING

Temperature Monitoring of Potentially Hazardous Foods (sanitize thermometer)

- food holding temperatures (60°F-125°F)
- food holding temperatures (42°F-59°F/126-139°F)

Food Condition

- food not inspected upon receipt
- food being transported in unclean container
- food being transported in unapproved containers
- vermin evidence observed on packaging
- adulterated food

Purveyor/Source

- no invoice

## 10. FACILITIES

Lavatories

- lack of adequate, pressurized potable cold or hot water
- water temperature less than 120°F but greater than 110°F
- water temperature less than 110°F
- handwash sink in disrepair
- handwashing sink lacks approved single-service soap or towels
- no single-service soap or towel dispenser

Toilet Rooms

- toilet facilities not maintained clean and in disrepair
- lack of toilet paper and/or dispenser
- missing/broken self-closing device at bathroom door
- toilet room not properly vented either by an openable window or a light-switch activated exhaust fan

Miscellaneous Storage

- storing non-facility items on the premises
- soiled linen not stored in a separate area

Janitorial Storage Area

- lack of adequate, pressurized potable cold or hot water
- water temperature less than 120°F but greater than 110°F
- water temperature less than 110°F
- lack of an area for the storage of cleaning supplies
- lack of a janitorial sink or an unapproved basin
- janitorial sink in disrepair

Hazardous Materials/Chemical Storage Area

- chemicals, pesticides, or cleaning compounds stored in unapproved area
- chemicals, pesticides, or cleaning compounds not properly labeled or used improperly

Employee Storage Area

- dressing room is cluttered, unclean or non-existent
- employees observed storing personal items in unapproved area

Vermin

- fresh rodent droppings or other evidence observed in the facility
- live cockroaches and evidence of cockroaches
- flies, food infesting insects or other insects observed in the facility
- exterior doors not rodent proofed

Living Quarters

- using food facility to sleep

**11. EXTERIOR PREMISES**

Trash

- overflowing trash cans in the food preparation area
- trash area unclean and trash observed on the floor
- trash not disposed of in leak proof and rodent proof containers
- exterior trashcans or bins not covered
- recyclables stored inside the food preparation area

Premises

- cast-off items stored at the exterior of the facility
- parking lot not maintained clean