

MODULE: SAFETY AND SANITATION

Introduction

Food-borne illness is a serious problem in Canada. Health Canada estimates that about two million Canadians suffer from a food-borne illness every year. Approximately 30 of these victims will die from the illness. Of the survivors, 2% to 3% will suffer chronic health problems. The annual cost of food-borne illness in Canada is estimated to be over \$1 billion

(<http://www.canfightbac.org/english/mcentre/mkit/foodborne.shtml>). Understanding and practicing safe food handling techniques will reduce the incidence of food-borne illness.

The objectives of the mini-course are for you and your classmates

- to understand food safety.
- to identify food-borne illnesses.
- to examine the conditions necessary for food-borne illness to occur.
- to learn how to prevent food poisoning.

To achieve your objectives, you will

1. Explain important terms, including:

- a) food safety,
- b) food-borne illness,
- c) food poisoning,
- d) food infection,
- e) food intoxication,
- f) microbes, pathogens,
- g) contamination,
- h) cross contamination,
- i) bacteria,
- j) Danger Zone,
- k) sanitation,
- l) personal hygiene.

2. Describe how food can become contaminated and how you can tell if a food is spoiled.

3. Describe the symptoms of food poisoning.
4. Some of the bacteria that may contaminate food include *Clostridium botulism*(botulism), *Staphylococcus aureus* (staph), *Salmonella*, *Clostridium perfringens*, *Escherichia (E) coli 0157:H7*, *Camplobacter*, and *Listeria*. For each, identify foods typically involved, symptoms of the illness and the factors that contribute to the spread of the illness.
5. Explain how microbes can be controlled or destroyed by controlling certain conditions: temperature, acidity (pH), moisture, food, oxygen, cleanliness, sanitation.
6. Diagram the Danger Zone.
7. Describe proper food storage principles and methods. Explain the relationship between proper food storage and the prevention of food poisoning.
8. Discuss the rule "When in doubt, throw it out!"
9. Explain how each of the following factors play a role in the prevention of food poisoning:
 - a) good sanitation,
 - b) proper food storage,
 - c) proper thawing and cooking of foods,
 - d) contamination and cross-contamination,
 - e) personal hygiene.

Process

Your group will create and present a "mini-course" for your classmates to learn how to handle food safely. The mini-course will be designed in **two** parts:

Information In: providing information and learning activities to help your classmates to learn and understand content knowledge

Information Out: opportunities (oral, written, graphic or three dimensional constructions) for your classmates to show that they do understand the content knowledge

Information In:

Create *two or more presentations* (possible formats: PowerPoint, video, web pages, etc.) of relevant information.

Create *one (or two) learning activities* to accompany the presentations so that your classmates are actively involved in using the information.

Suggestions for learning activities include

- a K-W-L activity (students identify what they **K**now, what they **W**ant to know, and what they have **L**earned from the presentation),
- completing fill-in-the-blank notes from the presentation information,
- answering questions,
- playing a game,
- completing a quiz.

Information Out:

Design *at least two opportunities* for your classmates to demonstrate that they have mastered the knowledge content.

Each of the opportunities must include a means of evaluating student understanding.

Suggestions for opportunities:	Suggestions for evaluation:
- creating posters or brochures	- rubric of required elements and work quality
- making crossword puzzles with answer keys	- checklist of terms to be included; answer key checked for accuracy
- scripting and performing a two to three minute skit	- script checked for accuracy of food safety facts
- creating a safe food handling plan for the dinner theatre	- rubric
- scripting and creating a 30 second radio or television commercial	- script checked for accuracy of food safety facts
- creating a game (e.g. Trivial Pursuit, Jeopardy)	- game questions evaluated for accuracy

Note: all sources used should be cited.

Learning Advice

This is a large task; to work efficiently, create a work plan to make sure that all of the objectives are covered. Divide up the research among the members of your group.