

# Food-Borne Illnesses

## Summary

Food-borne illnesses can be prevented through safe, food-handling techniques.

## Main Core Tie

Food And Nutrition

### Strand 1

## Background for Teachers

Food-Borne Illnesses - Some microorganisms are harmful to the human body. Other microorganisms in food cause food to spoil. Three microorganisms that might cause food to spoil are bacteria, mold, and yeast. Growth of these organisms in food can be undesirable.

Microorganisms, including bacteria, can be grouped according to their requirement for oxygen. Some grow only in the presence of oxygen (aerobes). Others go only in the absence of oxygen (anaerobes). Some are able to grow with or without oxygen (facultative anaerobes). This is important in keeping food safe and palatable.

Under natural conditions, anaerobes grow only in places protected from the air such as deep in the soil or under water. They can also grow under manmade anaerobic conditions, such as in canned or vacuum-packed foods which have not been processed or handles properly.

Most bacteria can be killed with heat; therefore, boiling water will often make food safe to eat. Some strains, however, are so resistant to heat that they are only killed with very high temperatures.

A food-borne illness is simply a sickness a person gets from eating contaminated food. Many contaminants are in the form of a harmful bacteria being present. Food intoxications are food-borne illnesses that come from consuming foods which contain toxins or poisons. Food infections are food-borne illnesses caused by eating food which has organisms that grow and cause illness after they enter the human body. Some of these are caused by molds and other fungi.

## Intended Learning Outcomes

Differences between food spoilage and food-borne illnesses include the differentiation of food infections and food intoxications, including characteristics of each.

## Instructional Procedures

See attachments below.

The students will participate in a PREASSESSMENT activity to evaluate their knowledge of food safety. Ideas will be listed on the board from brainstorming responses to the question, "What are some of the rules for maintaining sanitation in food handling and storage?" Responses will become a background for exploring the "why" and "how" of improper food handling and sanitation procedures in the kitchen.

After the students have shared all their responses, the teacher will present the handout FOOD PREPARATION AND HANDLING - SAFETY PROCEDURES and discuss the contents with the class. The teacher will emphasize that this is a FOOD SCIENCE laboratory and that they will be expected to follow good sanitation and food safety procedures while in the food lab.

The teacher may wish, at this time, to review the Food Safety and Sanitation Unit 6 of the Classroom and Laboratory Management curriculum guide.

The teacher will lead a discussion which covers the difference between food infections and food intoxications. The students will take notes on FOOD-BORNE ILLNESSES worksheet, PART A.

The teacher will lead a discussion which covers three food intoxications. The students will take notes

on FOOD-BORNE ILLNESSES worksheet, PART B.

The teacher will lead a class discussion about salmonella and trichinosis. The students will take notes on FOOD-BORNE ILLNESSES worksheet, PART C.

The class will investigate the advantages and disadvantages of a wooden versus a plastic cutting board and demonstrate the correct use and care, especially the sanitizing, of cutting boards and the knives used to cut up a chicken.

#### Assessment Plan

As a summative evaluation, the students will study for, take the test, and obtain a food handler's permit from the local (county) health department.

#### Authors

[Utah LessonPlans](#)