It’s Alive!: Foodborne Illnesses

**Media Type:** Microsoft® PowerPoint® Presentation  
**Duration:** 56 slides

**Goal:** To understand the cause of and steps required for the prevention of foodborne illnesses.

**Description:** This presentation explains the difference between a food infection and a food intoxication. Students will learn how to prevent the growth and spread of harmful bacteria which cause foodborne illness. Also, this presentation outlines common types of illness and infection causing agents.

**Objectives:**
1. To differentiate between food infection and food intoxication and define food safety terms.
2. To identify types of foodborne illnesses.
3. To determine methods of preventing foodborne illness.

**Horizontal Alignment**

<table>
<thead>
<tr>
<th>Core-Subject Area</th>
<th>Foundation Concept</th>
<th>Basic Understanding</th>
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<tr>
<td><strong>Science</strong></td>
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|                   | **Scientific Thinking and Investigating** | • Field and laboratory investigations  
|                   |                    | • Critical thinking and scientific problem solving  
|                   |                    | • Real-world investigations and applications  
|                   |                    | • Analytical skills  
|                   |                    | • Hypothesis development  
|                   |                    | • Researching and proving theories  
|                   |                    | • Collecting data  
|                   |                    | • Conducting experiments  
|                   |                    | • Technology-based research  
|                   |                    | • Evaluating conclusions  
|                   |                    | • Compare/contrast findings  
|                   |                    | • Classification/organization skills |
|                   | **Scientific Laws and Principles** | • Cycles, structures and processes  
|                   |                    | • Principles of biology, chemistry, anatomy, physiology or psychology  
|                   |                    | • Human development  
|                   |                    | • Horticulture  
|                   |                    | • Patterns of behavior  
|                   |                    | • Physical or kinesthetic activity  
|                   |                    | • Periodic table  
|                   |                    | • Food safety and sanitation  
|                   |                    | • Temperature control  
|                   |                    | • Equation development and solution  
|                   |                    | • Physical and chemical reactions  
|                   |                    | • Laws of physics |
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Lesson Plan

Student and Teacher Notes are available to print in outline format. You can access these documents under the “Printable Resources” section. If student licenses have been purchased, an interactive version of the Student Notes is available in the “Interactive Activities” section. If printing the full PowerPoint® is desired, you may download the file and print the handouts as needed.

Class 1: Begin class by having students complete the Foodborne Illness Anticipation Guide. Instruct students to keep the guide until the last class of the lesson. Distribute the It’s Alive!: Foodborne Illnesses Vocabulary Handout. Show the It’s Alive!: Foodborne Illnesses-Introduction segment of the presentation and complete the corresponding Assessment. Have students complete the Food Infection vs. Food Intoxication Activity.

Class 2: Begin class by passing out the Bacteria Investigation Project. Allow students to use the class time to complete this Project.

Class 3: Show the It’s Alive!: Foodborne Illnesses-Types of Foodborne Illnesses segment and complete the following Assessment. Remind students to use the Vocabulary Handout as a reference. Instruct students to complete the Foodborne Illnesses Poster Project and allow time for completion.

Class 4: Begin class by using the Foodborne Illnesses Anticipation Guide Activity as a review tool. To do this, have students complete the “After” column. Take a few minutes to discuss correct answers. Show the It’s Alive!: Foodborne Illnesses-Preventing Foodborne Illnesses segment of the presentation and complete the corresponding Assessment. Have students complete the Food Safety Thermometer Activity. Assign the Food Poisoning Prevention PSA Project explaining the project will be due at the end of Class 5.

Class 5: As a review, have students complete the Food Safety Violations Activity and present the Foodborne Illness Posters. Distribute the It’s Alive! Foodborne Illnesses Final Assessment.

Class 6: Conclude the lesson by allowing students to present their Food Poisoning Prevention PSA Project.

Lesson Links

Food and Drug Administration
- http://www.fda.gov

Centers for Disease Control
- http://www.cdc.gov

USDA Food Safety & Inspection Service

Career & Technical Student Organizations

FFA
- Agriscience Fair Project
- Food Science and Technology

FCCLA
- Culinary Arts

Using the Career Connections Activity, allow students to explore the various careers associated with this lesson. See the Activity for more details. If student licenses have been purchased: Students will select the interviews to watch based on your directions. If only a teacher license is purchased: Show students all the career interviews and instruct them to only complete the interview form for the required number of interviews.

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Lab Activities

Foodborne Illness Anticipation Guide

Directions:
On the first day of class, have students read through the statements on the anticipation guide and decide if they believe the statements are true or false. Explain students will use the true/false columns to the left of the statements to mark their answers. Upon completing the presentation, have students review and revise their original answers using the true/false columns to the right of the statements.

Food Infection vs. Food Intoxication

Directions:
Instruct students to write a three paragraph paper comparing and contrasting the similarities and differences between food infections and food intoxications. Explain students must list one example of illness caused by each. Students should also include information such as causes and methods of prevention. Remind students to include a bibliography with their paper.

Food Safety Thermometer

Directions:
Instruct students to create a graphic of a food safety thermometer. Explain thermometers must show appropriate freezing, refrigeration and cooking temperatures of various foods. Also, explain the thermometer must illustrate and label the temperature danger zone. Students must create their own graphic and may not print one from the Internet.

Food Safety Violations

Directions:
Students will read through the paragraph and look for food safety violations. Have students underline and number each food safety violation they see. Instruct students to explain in writing what should have been done to ensure food safety for each violation they underline on a separate sheet of paper. Remind students to make the numbers on the separate sheet match their numbers in the paragraph.

Projects

Bacteria Investigation

Directions:
Instruct students to choose three beneficial bacteria and three harmful bacteria to conduct research over. Students will use this research to fill in the provided tables. Instruct students to follow the example provided in the Harmful Bacteria Table. Students will then write any sources used in the included bibliography page.

Food Poisoning Prevention PSA

Directions:
Students will work in groups and create a three minute public service announcement on the prevention of foodborne illness. Tell students to focus on one or two steps of foodborne illness prevention, such as hand-washing or steps to be taken at a grocery store. Remind students to include a bibliography.

Foodborne Illness Posters

Directions:
Instruct students to choose a pathogenic microorganism to research further which causes foodborne illness. Explain students will create a poster with information and graphics on the foodborne illness. Information should include the name of the microorganism which causes the illness.