

**Unit Activities:**

Setting the Stage. Objectives,  
WebQuest, Foodborne Illness  
PowerPoint

**Instructional Events:**

Gain Attention, Inform Learners of  
the Objectives, Stimulate Recall of  
Prior Learning, Present the  
Stimulus

**Materials:**

Foodborne Illness  
PowerPoint  
Food & the Government  
WebQuest

**Student Handouts:**

Food and the Government  
(pg. 47)  
Foodborne Illness: Risks and  
Prevention (pg. 65)

**Activities:**

*Setting the  
Stage  
(7 minutes)*

Purpose: To capture attention and prepare students to learn and participate

- Write the following question on the board or overhead: **Has anyone in your family (yourself included) ever become sick as a result of food poisoning? Explain what they ate, how long they were sick, and what medical treatment, if any, they required to get better.**
  - Ask students to write down their responses to the question. Allow 3-5 minutes for students to do so.
  - Allow students to share their responses with the class.
  - Pose questions for discussion:
    - Why do you think certain foods caused foodborne illnesses?
    - What do you think could have been done to avoid getting sick?
  - Explain to students that food poisoning results from bacteria that grow in food that is mishandled.

*Inform the  
learner of  
the  
Objectives  
(3 minutes)*

Purpose: To help students understand what they are responsible for learning

- Tell students: **In this unit we are going to learn what causes foodborne illnesses, how to prevent them, and the possible outcomes of mishandling foods.**

**Learning  
Objectives:**

Students will be able to:

1. Identify and recognize characteristics and symptoms of Foodborne Illnesses.
2. Recognize that the United States government has a direct correlation with food safety.

**Missouri  
Standards:**

2C8d- Explain how power is distributed among individuals and branches of government.

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**Activities:**

*Food and  
the  
Government  
WebQuest  
(15 minutes)*

*Purpose: To familiarize students with new words, activate prior knowledge, and provide a guide to the concepts they will learn in this lesson.*

**Learner Level: Average-High**

- Distribute the **Food and the Government Worksheet**
- Ask students if they know that the government plays a vital role in the food that they eat every day.
- Working in pairs or individually, have students complete the first three questions on their worksheet. Discuss possible answers as a class.
- Working in pairs or individually, have students complete the *Government and Food WebQuest*.
- When completed, review answers with students. Discuss the ways that the government plays a role in the food that students eat everyday in preventing Foodborne Illnesses.

**Learner Level: Low-Average**

- Assign students into three small groups. Assign each group one of the first three questions from the *Food and the Government* worksheet. Students in small groups can discuss their questions and the possible answers. Record student responses on the board.
- Assign each group one of the three sections to complete on the worksheet and the *Food and the Government WebQuest*.
- When each group completes their assigned section, review all sections with the class to ensure that each student has a completed worksheet. Discuss the roles that the government plays in preventing foodborne illnesses from the foods that students eat every day.

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**Activities:**

*Foodborne  
Illness  
PowerPoint  
(30 minutes)*

*Purpose: To provide new information to students*

**Learner Level: All**

- Explain to students that in this presentation they will learn about foodborne illnesses and how to prevent them.
- Use the PowerPoint presentation *Foodborne Illness: Risks and Prevention* (The PowerPoint can be downloaded from [www.handsonclassrooms.org](http://www.handsonclassrooms.org))
- Give each student a copy of the worksheet **Foodborne Illness: Risks and Prevention** outline.
- Allow students time to read and answer the preview question (slide 2) before beginning the lecture. Discuss students' responses before continuing.
- Present and explain slides 3-6. Encourage students to record important details on their outline.
- Allow students time to read and answer the Review Question on slide 7. Discuss students' responses before continuing.
- Present and explain slides 8-10. Encourage students to record important details on their outline.
- Allow students time to read and answer the Review Question on slide 11. Discuss students' responses.

**Unit Activities:**

Review, Word Sort, Bacteria the Cause Foodborne Illness

**Instructional Events:**

Provide Learner Guidance, Elicit Performance,

**Materials:**

Internet or copies of information if no Internet access

**Student Handouts:**

Word Sort (pg. 69)  
Bacteria that Cause Foodborne Illnesses (pg. 71)

**Learning Objectives:**

Students will be able to:

1. Research and communicate characteristics of bacteria that cause Foodborne Illnesses
2. Identify symptoms of Foodborne Illnesses

**Activities:**

*Review  
(5 minutes)*

Daily Review Question: **Yesterday we learned what causes foodborne illnesses. What is one thing that you learned that surprised you the most? Today we are going to focus on the five most common bacteria associated with foodborne illnesses around the world.**

*Word Sort  
(10 minutes)*

*Purpose: To facilitate the transfer of new knowledge to long-term retention*

**Learner Level: All**

- Ask students to review their WebQuest worksheet and their powerpoint notes.
- Give each student a copy of the Word Sort worksheet.
- Have students sort each of the words in the Word Sort into the category where it best fits.
- After students have had enough time to complete the Word Sort, discuss their categories as a class.

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**Activities:*****Bacteria that  
Cause  
Foodborne  
Illnesses  
(40 minutes)***

Purpose: To allow the learner to practice the new knowledge. The repetition further increases the likelihood of retention of new information.

***Learner Level: Average-High***

- This activity introduces various foodborne pathogens.
- Distribute the **Bacteria that Cause Foodborne Illnesses** chart.
- Students may work individually or in pairs to complete the sheet.
- Direct students to the following website to complete their worksheet:  
<http://www.fightbac.org/content/view/11/18/> (Accessible from the student section of our website: [www.handsonclassrooms.org](http://www.handsonclassrooms.org))
- Once students have completed the worksheet, discuss their answers as a group to ensure that all students have the correct information.

***Learner Level: Low or if computer access is limited***

- Use the above activity with any of the following modifications:
  - Provide students with a hard copy of the website and allow them to use a highlighter to identify information needed to complete their charts.
  - Once they have identified all of the correct information, have them work individually or in pairs to transfer the information to their charts.
  - Before distributing the chart to students, fill in several of the boxes so that students are not overwhelmed by the entire chart.

**Unit Activities:**

Review, What's the Cause?  
Student Reflection

**Instructional Events:**

Provide Feedback, Assessing  
Performance

**Student Handouts**

What's the Cause? (pg. 74)

**Activities:**

*Review*  
(5 minutes)

Daily Review Question: **Yesterday we studied the most common bacteria associated with foodborne illnesses. What types of foods were most often mentioned? Today we are going to look at different foodborne pathogen scenarios.**

*What's the Cause?*  
(20 minutes)

*Purpose: To assess and facilitate further student learning*

**Learner Level: All**

- Distribute the **What's the Cause** worksheet to students.
- Students should work individually to determine which foodborne pathogen is responsible for the illness described in each scenario based on the knowledge they gained from the Internet Activity.
- Discuss answers as a class; ask students to defend their responses.

*Student Reflection*  
(20 minutes)

*Purpose: To determine if students are successfully meeting the learning objectives for this lesson.*

**Learner Level: All**

- Ask student to consider all they've learned so far about foodborne pathogens and foodborne illnesses.
- Have each student write:
  - 3 examples of foodborne bacteria that make you sick
  - 2 ways to prevent foodborne illness.
  - 1 thing they'll tell their parents about foodborne illness tonight.
- Encourage students to share their responses with the class.

**Learning Objectives:**

Students will be able to:

1. Apply knowledge of symptoms, onset time, and pathogens to identify causative agents in Foodborne Illness scenarios.
2. Evaluate their own understanding of the risks and preventative measures of foodborne illnesses.

**Unit Activities:**

Review, Researching the Impact of Disease in American History

**Instructional Events:**

Enhance Retention and Transfer

**Materials:**

Internet access, computers

**Student Handouts**

- Newspaper assignment sheet (pg.78)
- Rubric (pg.79)
- Writing an article tips (pg.80)
- Organizational Chart (pg.81)
- 5 W's Chart (pg.82)

**Activities:**

*Review  
(5 minutes)*

Daily Review Question: **Yesterday we looked at different foodborne illness scenarios. What was one thing you learned that surprised you the most? Today we are going to begin researching the impact of foodborne illnesses on historical events in the US.**

*Researching  
Impact of  
Disease in  
American  
History  
(50 minutes)*

*Purpose: To allow students to develop expertise with the new information and create a construct for transferring knowledge to long-term retention.*

**Learner Level: Average-High**

- Distribute the **Extra! Extra! Read All About It** assignment sheet to each student.
- Students will use the websites on the assignment sheet to find information relating the impact of disease on three important historical events in the US: 1) The Trail of Tears, 2) European Immigration and 3) Africans brought to the US through the Slave Trade.
- Their research will be presented in the format of a newspaper.
- Each newspaper must consist of at least four sections, two of which should be **Headline News** and **Health and Wellness**.

**Learning Objectives:**

Students will be able to:

1. Demonstrate proficient research skills by locating and evaluating a variety of teacher selected non-fiction
2. Critically analyze connections between foodborne illnesses and historic events, such as European immigration, Native American culture, and the African slave trade.
3. Locate and analyze written information on foodborne illnesses and their impact on historical events to prepare a newspaper that effectively communicates the connections between the two.

**Missouri Standards:**

- 3Af8B**-Analyze cultural interactions among these groups: Native Americans, Immigrants from Europe, Africans brought to America
- 7A8**-Select investigate, and present a topic using primary and secondary resources, such as oral interviews, artifacts, journals, documents, photos, and letters
- 7B8b**-Create maps, graphs, timelines, charts & diagrams to communicate information.
- 7C8**-Distinguish between fact and opinion and recognize bias and points of view
- 7D8**-Use technological tools for research and presentation

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**Activities:**

*Researching  
Impact of  
Disease in  
American  
History  
continued  
(50 minutes)*

- Students may choose the other two sections from the options given on the assignment sheet or other sections approved by the teacher.
- All sections should have at least one article.
- Each section must include one of the following: map, graph, timeline, chart, diagram, or an authentic photograph from the time period
- Students should work in groups to research their topics and construct the newspapers.
- Encourage students to be creative, while also reporting accurately
- Use the **Researching Impact of Disease in American History rubric** to assess students' work.

***Learner Level: Low-Average or if computer access is limited***

- Distribute the **Extra! Extra! Read All About It** assignment sheet to each student.
- Provide each student (or small groups) with hard copies of selected primary and secondary source information from websites.
- Students will use the hard copies of websites to find information relating the impact of disease on three important historical events in the US: 1) The Trail of Tears, 2) European Immigration and 3) African Slave Trade.
- Their research will be presented in the format of a newspaper.
- Each newspaper must consist of at least four sections, two of which should be **Headline News** and **Health and Wellness**.
- Students may choose the other two sections from the options given on the assignment sheet or other sections approved by the teacher.
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**Activities:**

*Researching  
Impact of  
Disease in  
American  
History  
continued  
(50 minutes)*

Examples of specific websites for research include:

Trail of Tears:

[http://en.wikipedia.org/wiki/Sandy\\_Lake\\_Tragedy](http://en.wikipedia.org/wiki/Sandy_Lake_Tragedy)

[http://en.wikipedia.org/wiki/Indian\\_Removal](http://en.wikipedia.org/wiki/Indian_Removal)

<http://www.nps.gov/archive/trte/TRTE/history.htm>

[http://anpa.ualr.edu/digital\\_library/Family%20Stories%20from%20the%20Trail%20of%20Tears.htm](http://anpa.ualr.edu/digital_library/Family%20Stories%20from%20the%20Trail%20of%20Tears.htm)

[http://www.anpa.ualr.edu/trail\\_of\\_tears/indian\\_removal\\_project/health/cholera.htm](http://www.anpa.ualr.edu/trail_of_tears/indian_removal_project/health/cholera.htm)

European Immigration:

<http://www.ohiohistorycentral.org/entry.php?rec=487>

[http://en.wikipedia.org/wiki/European\\_colonization\\_of\\_the\\_Americas](http://en.wikipedia.org/wiki/European_colonization_of_the_Americas)

<http://logicmgmt.com/1876/overview/medicine/diseases.htm>

<http://ocp.hul.harvard.edu/contagion/cholera.html>

African Slave trade:

[http://cghs.dadeschools.net/slavery/antebellum\\_slavery/interstate\\_slave\\_trade/ship\\_life.htm](http://cghs.dadeschools.net/slavery/antebellum_slavery/interstate_slave_trade/ship_life.htm)

[http://cghs.dadeschools.net/slavery/antebellum\\_slavery/plantation\\_slave\\_life/health.htm](http://cghs.dadeschools.net/slavery/antebellum_slavery/plantation_slave_life/health.htm)

<http://www.pbs.org/wgbh/aia/part1/1h304.html>

General:

<http://www.americanforeignrelations.com/Ga-He/Health-and-Disease.html>

<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm4829a.html>

**Unit Activities:**

Review, Researching the Impact of Disease in American History

**Instructional Events:**

Enhance Retention and Transfer

**Materials:**

Internet access, computers

**Student Handouts**

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**Activities:**

*Review  
(5 minutes)*

Daily Review Question: **Yesterday you began creating newspapers to communicate the findings of your research. What sections are you planning to include in your newspaper? Today you are going to continue/complete your research and your newspapers.**

*Researching  
Impact of  
Disease in  
American  
History  
(50 minutes)*

*Purpose: To allow students to develop expertise with the new information and create a construct for transferring knowledge to long-term retention.*

**Learner Level: Average-High**

- Distribute the **Extra! Extra! Read All About It** assignment sheet to each student.
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- Each newspaper must consist of at least four sections, two of which should be **Headline News** and **Health and Wellness**.

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**Activities:***Researching  
Impact of  
Disease in  
American  
History  
continued  
(50 minutes)*

- Students may choose the other two sections from the options given on the assignment sheet or other sections approved by the teacher.
- All sections should have at least one article.
- Each section must include one of the following: map, graph, timeline, chart, diagram, or an authentic photograph from the time period
- Students should work in groups to research their topics and construct the newspapers.
- Encourage students to be creative, while also reporting accurately
- Use the **Researching Impact of Disease in American History rubric** to assess students' work.

***Learner Level: Low-Average or if computer access is limited***

- Distribute the **Extra! Extra! Read All About It** assignment sheet to each student.
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**Activities:**

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Impact of  
Disease in  
American  
History  
continued  
(50 minutes)*

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[http://en.wikipedia.org/wiki/Indian\\_Removal](http://en.wikipedia.org/wiki/Indian_Removal)

<http://www.nps.gov/archive/trte/TRTE/history.htm>

[http://anpa.ualr.edu/digital\\_library/Family%20Stories%20from%20the%20Trail%20of%20Tears.htm](http://anpa.ualr.edu/digital_library/Family%20Stories%20from%20the%20Trail%20of%20Tears.htm)

[http://www.anpa.ualr.edu/trail\\_of\\_tears/indian\\_removal\\_project/health/cholera.htm](http://www.anpa.ualr.edu/trail_of_tears/indian_removal_project/health/cholera.htm)

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[http://cghs.dadeschools.net/slavery/antebellum\\_slavery/plantation\\_slave\\_life/health.htm](http://cghs.dadeschools.net/slavery/antebellum_slavery/plantation_slave_life/health.htm)

<http://www.pbs.org/wgbh/aia/part1/1h304.html>

General:

<http://www.americanforeignrelations.com/Ga-He/Health-and-Disease.html>

<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm4829a.html>

**Unit Activities:**

Review, Debriefing

**Instructional Events:**

Enhance Retention and Transfer

**Student Handouts:**

Researching Disease in United States History assignment sheet (pg.78)

**Learning Objectives:**

Students will be able to:

1. Demonstrate proficient research skills by locating and evaluating a variety of teacher selected non-fiction
2. Critically analyze connections between foodborne illnesses and historic events, such as the Civil War and Trail of Tears.
3. Locate and analyze written information on foodborne illnesses and their impact on historical events to prepare a newspaper that effectively communicates the connections between the two.

**Missouri Standards:**

**3Af8B**-Analyze cultural interactions among these groups: Native Americans, Immigrants from Europe, Africans brought to America

**7A8**-Select investigate, and present a topic using primary and secondary resources, such as oral interviews, artifacts, journals, documents, photos, and letters

**7B8b**-Create maps, graphs, timelines, charts & diagrams to communicate information.

**7C8**-Distinguish between fact and opinion and recognize bias and points of view

**7D8**-Use technological tools for research and presentation

**Activities:****Review**  
(5 minutes)

Daily Review Question: **Last week we learned about the causes and prevention of foodborne illnesses. You also researched some specific bacteria that can make you sick and learned about the impact of foodborne illnesses on historical events in the US. Did any of you handle your food differently this weekend as a result of what you learned this week? Today we are going to discuss your research findings and newspapers and finish up with a reflection on what you have learned over the past week.**

**Debriefing:**  
(25 minutes)

- After students have presented their newspapers to the class lead a brief classroom discussion on the effects of disease on Native Americans, European Immigration, and the African Slave Trade.
  - What information surprised students the most?
  - If there had been better knowledge of these diseases and their causes at the time, how might each of these events have turned out differently?
  - With students' newly acquired knowledge of how to prevent foodborne illnesses, what advice might they give now to Native Americans, Immigrants, and Slaves to avoid diseases?