FOOD SAFETY FOR LIFE

FOOD SAFETY FOR LEARNING, FOOD SAFETY FOR LIFE

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New Jersey

HANDS ON

Real-World Lessons for Middle School Classrooms

Approved by

INSTITUTE OF AGRICULTURE
THE UNIVERSITY OF TENNESSEE
Real. Life. Solutions.

GMA Science and Education Foundation

IFT feeding the minds that feed the world

USDA United States Department of Agriculture

SOCIAL STUDIES

Summary of Activities:

Setting the Stage

Word Splash Predictions

Foodborne Illnesses: Risks and Prevention

Word Splash Statements of Fact

Bacteria that Cause Foodborne Illnesses

What's the Cause?

Student Reflection

Researching Foodborne Outbreaks

Newspapers

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Day	Social Studies Standards	
Day 1	L.7.4	Use context (e.g., the overall meaning of a sentence or paragraph; a word's position or function in a sentence) as a clue to the meaning of a word or phrase.
	NJSLSA.L4	Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning or its part of speech to match
	SL.7.1	Engage effectively in a range of collaborative discussions (one-on-one, in groups and teacher –led) with diverse partners on grade 6 topics, texts, and issues, building on others' ideas and expressing their own clearly.
Day 2	NJSLSA.L4	Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning or its part of speech to match
	L.7.4d	Verify the preliminary determination of the meaning of a word or phrase (e.g., by checking the inferred meaning in context or in a dictionary).
Day 3	RL.7.1	Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
	RL.7.8	Trace and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient to support the claims.
Day 4	6.2.8.D.4.c	Assess the demographic, economic, and religious impact of the plague on Europe.
	6.2.8.C.3.b	Explain how classical civilizations used technology and innovation to enhance agricultural/manufacturing output and commerce
	NJSLSAW.7.6	Use technology, including the Internet, to produce and publish writing and link to and cite sources as well as to interact and collaborate with others.
	NJSLSAW.7.7	Conduct short research projects to answer a question, drawing on several sources and refocusing the inquiry when appropriate.
	6.2.8.D.4.c	Assess the demographic, economic, and religious impact of the plague on Europe.
Day 5	6.2.8.C.3.b	Explain how classical civilizations used technology and innovation to enhance agricultural/manufacturing output and commerce
	NJSLSAW.7.6	Use technology, including the Internet, to produce and publish writing and link to and cite sources as well as to interact and collaborate with others.
	NJSLSAW.7.7	Conduct short research projects to answer a question, drawing on several sources and refocusing the inquiry when appropriate.
Day 6	6.2.8.D.4.c	Assess the demographic, economic, and religious impact of the plague on Europe.
	SL.7.4	Present claims and findings, emphasizing salient points in a focused, coherent manner with pertinent descriptions, facts, details, and examples.
	SL.7.5	Included multimedia components and visual displays in presentations to clarify claims and findings.

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Robert Gagne's Nine Events of Effective Instruction-Social Studies

Stage of Instruction	Event	Description	Social Studies Activity
Pre-Instruction	Gaining Attention	Stimulates readiness to learn and participate. Stimuli like surprises or questions are typically used for this event.	Setting the Stage
	Informing learners of the objectives	Generates expectancy by helping them understand what they will be learning	Inform learners of the objectives
	Stimulating recall of prior learning	Relating new information to something they already know or have experienced helps learners make sense of the lesson	Word Splash Predictions
Instruction	Presenting the stimulus	New information is presented. Strategies like providing examples or presenting vocabulary should be used to present the lesson content to provide more effective instruction	Foodborne Illness PowerPoint
	Providing learning guidance	Helps facilitate the process of long-term information storage	Word Splash Statements of Fact
	Eliciting performance	Requires the learner to practice the new skill or behavior. The repetition further increases the likelihood of retention of the new information	Bacteria that Cause Foodborne Illnesses
Post-Instruction	Providing feedback	Assess and further facilitate learning. Typically, activities designed for feedback are for comprehension, not scoring	What's the Cause?
	Assessing performance	To evaluate the effectiveness of the instructional events, you must test to see if the expected learning outcomes have been achieved	Student Reflection
	Enhancing retention and transfer	Helps learners develop expertise by internalizing the new information. Methods for helping learners internalize are paraphrasing, generating examples, creating concept maps or outlines, and repetition	Researching Foodborne Outbreaks Creating Foodborne Illness Outbreak Maps

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Unit Activities:	Setting the stage, Objectives, Word Splash Predictions, Foodborne Illness PowerPoint	*Learning Objectives:*	Students will be able to: 1. Identify and recognize characteristics and symptoms of Foodborne Illnesses 2. Connect prior knowledge of symptoms and causes of Foodborne Illnesses to relevant vocabulary
Instructional Events:	Gain Attention, Inform Learners of the Objectives, Stimulate Recall of Prior Learning, Present the Stimulus		
Materials:	Foodborne Illness PowerPoint		
Student Handouts:	Word Splash Foodborne Illness Risks and Preventions	*Content Standards:*	L.7.4a NJSLSA.L4 SL.7.1

Activities:

Setting the Stage (7 minutes)

Purpose: To capture 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 feel better.**
    - Ask student 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 growing 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.**

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Activities:

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

Word Splash Predictions (15 minutes)

Learner Level: Average-High

- Distribute the **Foodborne Illness Word Splash.**
- Ask students to read each word and think about how that word is related to foodborne illness.
- Working in pairs or individually, students should then write at least 5 prediction statements similar to the example given on the sheet and underline words used from the Word Splash.
- Remind students that they will compete the Statements of Fact later in the lesson.

Learner Level: Low-Average

- Before class write each of the word splash words on a separate index card.
- Give one card to each student or pair.
- Ask each student to think for 1 minute about how their word might be related to foodborne illnesses.
- Ask each student to share the relation of their word with the class.
- Record student responses of "predictions" on the board.
- Remind students that they will use their word later in the lesson to create Statements of Fact.

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.handsonclassroooms.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 student to record important details on their outline.
- Allow students time to read and answer the Review Question on slide 11. Discuss students' responses.

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WordSplash

Use the words above to describe Foodborne Illness in predictions and statement of facts sentences below.

Student Predictions:
Example: Foodborne Illnesses are caused by bacteria.

Statements of Fact:

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Foodborne Illness

Risks and Prevention

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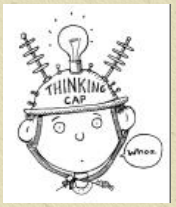
University of Tennessee, Knoxville 2006

Preview Question

- What are three things you already know about foodborne illness?

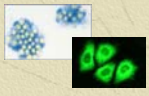


USDA NIFSI Food Safety in the Classroom©
University of Tennessee, Knoxville 2006

What is Foodborne Illness?

- Any illness that humans get from food.
- Can be caused by bacteria, viruses, parasites, or toxins (poisons)

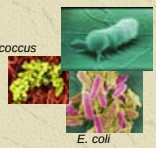
Parasites like this tapeworm can make you sick.



Hepatitis and Norwalk viruses can cause foodborne illnesses.

Salmonella

Staphylococcus aureus



E. coli O157:H7

These bacteria can contaminate foods.

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A Closer Look: Bacteria

Salmonella

Staphylococcus aureus

E. Coli O157:H7

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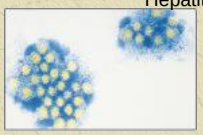
A Closer Look: Viruses and Parasites

Hepatitis



Tapeworm

Norwalk

Hepatitis and Norwalk viruses can cause foodborne illnesses.

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University of Tennessee, Knoxville 2006

What habits lead to foodborne illness?

- The reported foodborne outbreaks from 1993-2003 were most often caused by:
  - Not keeping food hot or cold enough
  - Poor personal hygiene (not washing hands, covering mouth and nose when coughing or sneezing)
  - Not cooking or reheating food to the proper temperature
  - Cross-contamination of raw and cooked foods
  - Not cleaning equipment well

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University of Tennessee, Knoxville 2006

Review Question

- What is a foodborne illness and how are you most likely to get one?

What are the symptoms?

- Diarrhea, constipation, or stomach ache
- Headaches
- Nausea and vomiting
- Fever
- Possibly, blood in the feces
- Serious symptoms may require medical attention

How can I prevent food poisoning?

- Pay attention to cleanliness (wash hands)
- Make sure that all food is thoroughly cooked
- Refrigerate all leftovers immediately
- Separate meat and veggies when preparing foods

What are basic rules for preparing food safely?

- Wash your hands after going to the bathroom and before preparing food.
- Wash your hands when switching from one type of food to another (vegetables to meat).
- Wash kitchen utensils when switching from one type of food to another.
- Store food in the refrigerator. Don't leave meats, poultry, and fish out for a long time.

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Review Question

- How can you prevent a foodborne illness?

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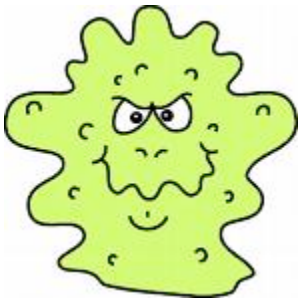
University of Tennessee, Knoxville 2006

Foodborne Illness

Risks and Prevention



Preview Question

- What are three things you already know about foodborne illness?

What is Foodborne Illness?

What habits lead to foodborne illness?

Review Question

- What is a foodborne illness and how are you most likely to get one?

What are the symptoms?

How can I prevent food poisoning?

What are basic rules for preparing food safely?

Review Question

- How can you prevent a foodborne illness?

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Unit Activities	Review, Word Splash Statements of Fact, Bacteria that Cause Foodborne Illness	*Learning Objectives*	Students will be able to: 1. Research and communicate characteristics of bacteria that cause Foodborne Illnesses 2. Identify symptoms of Foodborne Illnesses
Instructional Events:	Provide Learner Guidance, Elicit Performance		
Materials:	Internet or copies of information if no Internet access		
Student Handouts:	Word Splash (from Day 1) Bacteria that Cause Foodborne Illnesses	*Content Standards:*	NJSLSA.L4 L.7.4d

Activities:

Review (5 minutes)

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

Word Splash Statements of Fact (10 minutes)

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

Learner Level: Average-High

- Ask students to review the predictions they first made on their Word Splashes. How many were correct?
- Now ask students to write at least 5 statements of fact using words in the Word Splash. Encourage students to use 5 new words from the Word Splash.
- Discuss these as a class.

Learner Level: Low-Average

- Refer to student predictions recorded on the board from earlier.
- Discuss which predictions were correct and which were incorrect.
- Ask students to work individually or with a partner to write 5 new statements of fact.
- Encourage volunteers to share their responses. Record these responses on the board.

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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.ncagr.gov/cyber/kidswrld/foodsafe/badbug/badbug.htm (Accessible from the student section of our website: 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.

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Bacteria that Cause Foodborne Illnessess

Directions: Use the internet site below to complete the following chart.
http://www.ncagr.gov/cyber/kidswrld/foodsafe/badbug/badbug.htm

Microorganisms	Onset	Symptoms	Associated Foods
Salmonella	8-12 hours after eating	Abdominal pain and diarrhea, and sometimes nausea and vomiting	Raw meats, poultry, eggs, milk and other dairy products, shrimp, frog legs, yeast, coconut, pasta and chocolate
Listeria monocytogenes	From 7-30 days after eating, but most have been reported 48-72 hours	Fever, headache, nausea, and vomiting. Primarily affects pregnant women and their fetuses.	Soft cheese, unpasteurized milk, hot dogs and deli meats, imported seafood products, frozen cooked crab meat, cooked shrimp
E.coli O157:H7	2-5 days after eating	Severe bloody diarrhea and abdominal cramps, usually little or no fever is present	Ground beef, raw milk, sprouts, lettuce, salami, unpasteurized milk and juice, and swimming in or drinking sewage-contaminated water
Campylobacter	2-5 days after eating	Diarrhea, abdominal cramping, fever, and sometimes bloody stools	Raw poultry, meat, and unpasteurized milk
Staphylococcus aureus	30 minutes-8 hours after eating	Diarrhea, vomiting, nausea, abdominal pain, cramps	Meats, poultry, egg products, tuna, potato and macaroni salads, and cream-filled pastries

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Bacteria that Cause Foodborne Illnessess

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Microorganisms	Onset	Symptoms	Associated Foods
Salmonella			
Listeria monocytogenes			
E.coli O157:H7			
Campylobacter			
Staphylococcus aureus			

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Unit Activities:	Review, What's the Cause?, Student Reflection	*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.
Instructional Events:	Provide Feedback, Assessing Performance		
Student Handouts:	What's the Cause?		
		Content Standards:	RI.7.1 RI.7.8

Activities:

Review: 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 learn about causes of foodborne illnesses.**

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 and 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 students to consider all they have 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 will tell their parents about foodborne illness tonight.
- Encourage students to share their responses with the class.

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Teacher's Copy

WHAT'S THE CAUSE?

Directions: Using the Food Pathogen Internet Activity Sheet, determine which organism caused the following illnesses:

*Campylobacter jejuni* 1. John's mom was in a hurry, so she cooked the chicken until it looked done, cut it, and made chicken salad; but she forgot to refrigerate it. Later that day, John had seconds of the chicken salad. Three days later he developed a fever, muscle pain, and watery diarrhea.

*E. coli* O157:H7 2. Sherry and her family had a cookout at the park. Her father grilled some hamburgers and everyone ate and started playing. Two days later, Sherry started having abdominal cramps and developed bloody diarrhea but had no fever.

*Salmonella* 3. Mia's mother bought her a chocolate bar for being so good at the doctor's office. The next day, she began to have abdominal pain and had diarrhea.

*Salmonella* 4. Katie and her mom mixed milk, sugar, whipping cream, vanilla, and eggs with ice to make homemade ice cream. Twelve hours later, they both had diarrhea, nausea, and abdominal pain.

*Listeria monocytogenes* 5. Joe bought a deli meat sandwich from the grocery store. A few days later, he had a headache, fever, and then started vomiting.

*E. coli* O157:H7 6. Thomas and his grandfather bought unpasteurized apple juice from a roadside fruit stand. Three days later he had a severe stomach ache and bloody diarrhea.

*Staphylococcus aureus* 7. David ate potato salad at his family picnic. One hour later he began having severe vomiting and diarrhea.

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WHAT'S THE CAUSE?

Directions: Using the Food Pathogen Internet Activity Sheet, determine which organism caused the following illnesses:

_____ 1. John's mom was in a hurry, so she cooked the chicken until it looked done, cut it, and made chicken salad; but she forgot to refrigerate it. Later that day, John had seconds of the chicken salad. Three days later he developed a fever, muscle pain, and watery diarrhea.

_____2. Sherry and her family had a cookout at the park. Her father grilled some hamburgers and everyone ate and started playing. Two days later, Sherry started having abdominal cramps and developed bloody diarrhea but had no fever.

_____ 3. Mia's mother bought her a chocolate bar for being so good at the doctor's office. The next day, she began to have abdominal pain and had diarrhea.

_____4. Katie and her mom mixed milk, sugar, whipping cream, vanilla, and eggs with ice to make homemade ice cream. Twelve hours later, they both had diarrhea, nausea, and abdominal pain.

_____5. Joe bought a deli meat sandwich from the grocery store. A few days later, he had a headache, fever, and then started vomiting.

_____6. Thomas and his grandfather bought unpasteurized apple juice from a roadside fruit stand. Three days later he had a severe stomach ache and bloody diarrhea.

_____7. David ate potato salad at his family picnic. One hour later he began having severe vomiting and diarrhea.

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Unit Activities:	Review, Researching Foodborne Illnesses and Outbreaks during the Middle Ages	*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 the effects of food and waterborne illnesses during the Middle Ages. 3. Locate and analyze written information on food and waterborne illnesses and their impact on the history of the Middle Ages to prepare a newspaper that effectively communicates the connections between the two.
Materials:	Internet access, computers		
Student Handouts:	-Extra! Extra! Read All About It assignment sheet -Researching Outbreaks During the Middle Ages -Tips for Writing a Newspaper article -Organizational Chart -5W's Chart	*Content Standards:*	6.2.8.D.4.c 6.2.8.C.3.b NJSLSA.W.7.6

Activities:

Review (5 minutes)

Daily Review Question: **Yesterday we learned some causes of foodborne illnesses. What are some causes of food illnesses? Today you are going to begin researching the impacts of foodborne illnesses on the Middle Ages.**

Researching Foodborne Outbreaks during International Conflicts (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 to food and waterborne diseases during the Middle Ages.
- 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 & 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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Researching Foodborne Outbreaks: (continued)

- All sections should have at least one article.
- 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 the Foodborne Outbreaks During the Middle Ages** 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 outbreaks to read.
- Students will use the hard copies of websites to find information relating the impact of an outbreak during the Middle Ages.
- 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 & Wellness.
- Students may choose the other two sections from the options given on the assignment sheet or other sections approved by the teacher.
- Students should work in groups to research their topics and construct the newspapers.
- All sections should have at least one article.
- Encourage students to be creative, while also reporting accurately.
- Use the **Researching the Foodborne Outbreaks During the Middle Ages** rubric to assess students' work.

Specific websites for research include:

Typhoid Fever:
http://www.mayoclinic.com/health/typhoid-fever/DS00538/DSECTION=causes
http://www.britannica.com/EBchecked/topic/611812/typhus

Cholera:
http://factsanddetails.com/world.php?itemid=2148&subcatid=381

General:
http://www.uic.edu/classes/osci/osci590/3_3%20European%20Disease%20in%20the%20New%20World.htm
http://hebesmedievalwiki.wikispaces.com/Diseases

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Extra! Extra! Read All About it!

Food and waterborne diseases were very common during the Middle Ages. Many of the diseases we have today originated in the medieval times. At the time little was known about the cause or prevention of these diseases, often resulting in many cases of illness. When the disease occurs in many more people than would be expected at a particular time and place, it is called an outbreak. These outbreaks were often believed to be punishment from god or witch-craft. In this assignment, you will research a medieval outbreak and create a newspaper to share your findings.

Choose one of the following outbreaks to research:

- **Typhoid Fever (*Salmonella typhi*)**
- **Cholera (*Vibrio cholerae* O1)**

Your newspaper should consist of **at least** four sections. It must include a front page with *Headline News* and a section on *Health & Wellness*. For each of these sections, write at least one article that includes important information you found in researching your topic.

You may choose the other two topics from the following possibilities:

Obituaries, Editorials, Business, Entertainment, Comics, and *Classifieds.*

In these sections, feel free to be creative, but be sure to include information found in your research and remember to be consistent with the time period (for example, no ads to buy microwaves in the classifieds!). You can use pictures, graphics, colors, different fonts, etc. to try to capture the reader's attention.

Specific websites to consider in your research are listed below:

Typhoid Fever:
http://www.mayoclinic.com/health/typhoid-fever/DS00538/DSECTION=causes
http://www.britannica.com/EBchecked/topic/611812/typhus

Cholera:
http://factsanddetails.com/world.php?itemid=2148&subcatid=381

General:
http://www.uic.edu/classes/osci/osci590/3_3%20European%20Disease%20in%20the%20New%20World.htm
http://hebesmedievalwiki.wikispaces.com/Diseases

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Researching Foodborne Illnesses During the Middle Ages

0	2	4	6	8	10	Your research focuses on the effects of disease during the Middle Ages
0	2	4	6	8	10	You use credible resources for your research and keep a bibliography of sources.
0	2	4	6	8	10	Your newspaper consists of at least four different sections.
0	2	4	6	8	10	Your newspaper has a Headline News and a Health & Wellness section which each contain at least one article.
0	2	4	6	8	10	Your newspaper has at least two optional sections from the list provided or approved by your teacher and each of these sections contains at least one article.
0	2	4	6	8	10	In each of your articles, you include relevant and factual information related to your chosen research topic.
0	2	4	6	8	10	Your newspaper is free from spelling and grammatical errors and demonstrates appropriate use of language.
0	2	4	6	8	10	Your newspaper shows an honest attempt to demonstrate creativity and to capture the reader's attention. Feel free to use pictures, graphics, colors, different fonts, etc.
0	2	4	6	8	10	Your newspaper is neat (free from smudges and stains) and easy to read.
0	2	4	6	8	10	Each member of your group contributes equally to the final product.

_____

TOTAL: /100 points

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Extra! Extra! Read All About It!

Tips for Writing a Good Newspaper Article

Newspaper articles require a different style of writing from what is used when writing a story. The newspaper article has all of the important information in the opening paragraph.

This information includes:
who, **what**, **when**, **where**, **why** and **how**.

It is written this way because most people do not read an entire newspaper article all the way through. So newspaper writers put the most important information at the beginning.

A typical newspaper article contains five (5) parts:

Headline (or Title): This is a short, attention-getting statement about the event.

Byline: This tells who wrote the story.

Lead paragraph: This has ALL of the **who, what, when, where, why** and **how** in it. A writer must find the answers to these questions and write them into the opening sentence(s) of the article. Try to hook the reader by beginning with a funny, clever, or surprising statement. Go for variety: try beginning your article with a question or a provocative statement.

Explanation: Give the reader the details. Include one or two quotes from people you interviewed. Write in the third person (he, she, it, they). Be objective -- never state your opinion. Use quotes to express others' opinions!

Additional Information: Wrap it up somehow (don't leave the reader hanging. Please don't say...."In conclusion" or "To finish..." (yawn!) Try ending with a quote or a catchy phrase. This part can also include information about a similar event.

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http://quest.arc.nasa.gov/aero/wright/teachers/pdf/language/Newspaper_Article.pdf
http://www.media-awareness.ca/english/resources/educational/handouts/broadcast_news/news_article_formula.cfm

Extra! Extra! Read All About It!

Organizational Chart for Research

Use the chart below to organize your research and keep track of the sources in which you found information.

Topic: **Group Members:**

Source	Information

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Name _____ Date _____

Five W's Chart

Fill in each row with details that answer the question.

What happened?
Who was there?
Why did it happen?
When did it happen?
Where did it happen?

Unit Activities:	Review, Foodborne Illnesses and Outbreaks during the Middle Ages	*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 the effects of food and waterborne illnesses during the Middle Ages. 3. Locate and analyze written information on food and waterborne illnesses and their impact on the history of the Middle Ages to prepare a newspaper that effectively communicates the connections between the two.
Instructional Events:	Enhance Retention and Transfer		
Materials:	Computer access, Internet		
Student Handouts:	– Extra! Extra! Read All About It assignment sheet – Researching Outbreaks During the Middle Ages – Tips for Writing a Newspaper article – Organizational Chart – 5 W's Chart	*Content Standards:*	6.2.8.D.4.c 6.2.8.C.3.b W.7.6 W.7.7

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 complete your research and your newspapers.**

Researching Foodborne Outbreaks During International Military Conflicts (50 minutes)

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 to bacterial diseases during the Middle Ages.
- 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 & Wellness.
- 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.
- 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 Outbreaks During the Middle Ages** rubric to assess students' work.

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Activities:
Researching Foodborne Outbreaks During International Military Conflicts (50 minutes)

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 outbreaks to read.
- Students will use the hard copies of websites to find information relating the impact of an outbreak during the Middle Ages.
- 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 & Wellness.
- Students may choose the other two sections from the options given on the assignment sheet or other sections approved by the teacher.
- Students should work in groups to research their topics and construct the newspapers.
- All sections should have at least one article.
- Encourage students to be creative, while also reporting accurately.
- Use the **Researching Outbreaks During the Middle Ages** rubric to assess students' work.

Specific websites for research include:

Typhoid Fever:
http://www.mayoclinic.com/health/typhoid-fever/DS00538/DSECTION=causes
http://www.britannica.com/EBchecked/topic/611812/typhus

Cholera:
http://factsanddetails.com/world.php?itemid=2148&subcatid=381

General:
http://www.uic.edu/classes/osci/osci590/3_3%20European%20Disease%20in%20the%20New%20World.htm
http://hebesmedievalwiki.wikispaces.com/Diseases

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Unit Activities:	Review, Debriefing	*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 the effects of food and waterborne illnesses during the Middle Ages. 3. Locate and analyze written information on food and waterborne illnesses and their impact on the history of the Middle Ages to prepare a newspaper that effectively communicates the connections between the two.
Instructional Events:	Enhance Retention and Transfer		
Student Handouts:	Extra! Extra! Read All About It		
		Content Standards:	6.2.8.D.4.c SL.7.4 SL.7.5

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 food and waterborne illnesses during the Middle Ages. 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.**

- After students have presented their newspapers to the class lead a brief classroom discussion on the effects of food and waterborne disease during the Middle Ages.
    - 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 people who lived in the Middle Ages or those currently in developing countries to avoid food and waterborne diseases?

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