

LESSON TITLE: THE IMPACT OF INFECTIOUS DISEASE ON NEW ENGLAND NATIVE AMERICAN TRIBES

GRADE/AUDIENCE:

- Grade 9
- Science/Living Environmental Science (Immune System)

STATE STANDARDS:

Science:

- Living Environment Key Idea 7: Human decisions and activities have had a profound impact on the physical and living environment.

Social Studies/ History

- HLC.03 Solve problems using critical thinking skills (analyze, synthesize, and evaluate) independently and in teams. Solve problems using creativity and innovation.
- WHST.11-12.7 Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.

Library Science

- **IFC Skill:** Pursues a balanced perspective by evaluating information based on authority, accuracy, point of view and reliability. (IFC Library Assessment 9.2)

LESSON OBJECTIVES:

- Students will see the relationship between Science and History.
- Students will comprehend concepts related to health promotion and disease prevention.
- Analyze how behavior can impact health maintenance and disease prevention
- Analyze how information from the community influences health

- Express information and opinions about health problems
- Students are introduced to vocabulary, and their prior knowledge about infectious diseases and its impact on Native American tribes.

LESSON OBJECTIVES FOR YOUR STUDENTS:

Students will be able to:

- Describe symptoms, mode of transmission, and causes of the disease SMALL POX, TUBERCULOSIS ETC.
- Explain the destruction small pox had on the Native Americans living in and traveling through the New England in the 1600's,
- Compare the small pox outbreaks of the 1600's, cholera outbreaks of the 1800's to today's Ebola outbreaks in Africa
- Examine the symptoms of, modes of transmission, and causes of several (selected) infectious diseases.
- Examine the impact of the many infectious diseases on the Native American tribes in New England.
- Discuss career and college programs in the subject area

COMPELLING / GUIDING QUESTIONS:

- What is an infectious disease?
- What infectious diseases have been in the news headlines today?
- What are the specific causes of infectious diseases?
- What are the occurrences of infectious diseases?
- How can infectious diseases be treated and prevented?
- How did infectious diseases impact Native American tribes in New England?

DESCRIPTION OF LEARNING TASKS / ACTIVITIES:

DAY 1

Part 1

1. Write the following journal prompt on the board or overhead; "Using a paragraph format, how would you describe the term infectious disease?" What are some of the

infectious diseases common today and in the past? What are some of the infectious diseases that are making headlines today?

2. Discuss the many Native American Tribes in New England using maps and list of tribes.
3. Pair students: have them research then discuss their responses and come up with a definition of infectious disease to share with the class.
4. Allow students to use the computers in the library to research. Write each definition of infectious disease on the smartboard. Hand out the Small Pox and Tuberculosis resource sheet obtained from the web site, Centers for Disease Control and Prevention.
5. Show students video about Infectious Diseases and Impact on Native American Communities. Video: **The West**, Episode 3 ([Speck of the Future](#)), "[My Share of the Rocks](#)"

Part 2

6. Using the data collection sheet have students research an individual infectious disease. http://www-tc.pbs.org/weta/thewest/lesson_plans/Datacollectionsheet.pdf
7. Discuss Various Careers in the field <http://www.khake.com/page2.html>

Day 2

Part 1

Have students to read the many primary and secondary resources about Infectious Diseases in New England during the 1600's. Hold a class discussion on small pox and tuberculosis; ask students the following information about small pox and tuberculosis which they should have picked up from the readings. Write their responses on the smartboard:

- Are smallpox and tuberculosis infectious diseases? How do you know?
- What are some symptoms of smallpox and tuberculosis?
- Are they potentially fatal diseases?
- What conditions of life during that time might lead to getting this disease?
- How do they treat this disease?
- What happened to various Native American tribes impacted by these diseases?

TIME NEEDED FOR LESSON: 2 Days (90 minute periods)

MATERIALS, RESOURCES, TECHNOLOGY NEEDED:

- Access to Library for use of Online Databases www.nycenet.edu

- Smartboard
- Video: **The West**, Episode 3 ([Speck of the Future](#)), "[My Share of the Rocks](#)"
- Prezi Infectious Disease Presentation
<http://prezi.com/m6adeeplozpu/where-do-new-infectious-diseases-come-from/>
- Data Collection Sheet
http://www-tc.pbs.org/weta/thewest/lesson_plans/Datacollectionsheet.pdf
- Infectious Disease Worksheet
http://www.cdschools.org/cms/lib04/PA09000075/Centricity/Domain/1408/Disease_Study_Worksheet.doc

PRIMARY OR SECONDARY RESOURCES (WORKS CITED):

- Early New England Accounts of the Outbreaks (Ex: Increase Mather)
- Peters, Stephanie True. Smallpox in the New World. Benchmark Books, 2004.
- http://www.nativeweb.org/pages/legal/amherst/lord_jeff.html Lord Jeffrey Amherst's letters discussing germ warfare against American Indians
- <http://www.mashantucket.com/tribalhistory.aspx>
- Mayo Clinic Infectious Diseases
<http://www.mayoclinic.org/diseases-conditions/infectious-diseases/basics/definition/con-20033534>
- National Institute of Health
<http://www.niaid.nih.gov/Pages/default.aspx>
- Career Links
<http://www.khake.com/page2.html>
- Kids Health
<http://www.kidshealth.org.nz/infectious-diseases#sthash.0UWf91Yl.dpu>

PRIOR LEARNING, CONNECTIONS, STUDENT NEEDS OR INTERESTS, COMMON MISCONCEPTIONS:

- Students should know that throughout time, disease has played a role in the lives and deaths of people. During the 16-18th centuries there were a variety of diseases that found their way to this soil. Once here, disease spread across the lands sparing no one. White settlers were responsible for introducing several diseases to the Native American population. Diseases such as tuberculosis, small pox and cholera, wiped out Native Americans.

- Infectious diseases are spread in different ways.
- There are different types of microbes that cause disease.
- Time between exposure and sickness
- Early signs of illness
- How long the child will be infectious
- What are some of today's infectious diseases impacted the global community.

SUGGESTED DIFFERENTIATIONS:

- Use a variety of instructional approaches, such as whole-class teaching, small group work, paired work, co-operative learning, individual teaching.
- Use a variety of instructional strategies (e.g. demonstrations, role plays, video, active learning etc.) to appeal to visual, auditory and kinaesthetic learners.

CROSS-DISCIPLINARY CONNECTIONS:

- Library Science
- US History
- Global/World History
- Living Environment

FORMATIVE ASSESSMENT PROCESSES (INCLUDING STUDENT SELF-ASSESSMENT):

- Students will be assessed on the following writing assignments:
Students participate in the What's Your Perspective: Students are to take the information from their research and write an article for a medical journal. Students should write the article from the prospective of a doctor who has been following the progression of their assigned disease in a fictitious patient. The article should be similar to the dialog recorded by early New England Accounts.
- Research one career or college topic related to the field of infectious disease. See assignment sheet.