



## **Introduction to the Diseases of Smallpox, Measles and Influenza and the Effects on the Indigenous Populations on the Continent of North America**

Curriculum Unit 09.05.03  
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### **Abstract:**

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The Columbian Exchange transformed the continent of North America as well as the continent of Europe. The Age of Exploration led to the creation of a new culture as well as the transfer of food products, animals, culture and most importantly diseases between the Old World and the New World. The European-American exchange of infectious diseases was responsible for the demographic havoc of the native populations in the New World after 1492. With the discovery of America in 1492, Columbus's sailors were infected with diseases such as yaws that could spread in Europe after they returned home. Therefore, the Columbian Exchange permanently transformed the way of life for both Europeans and Native Americans on both continents.

## Introduction:

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The purpose for the unit is to introduce the concept of viruses and how virus diseases are ultimately formed. Then, from a historical perspective, the unit will introduce the diseases of Smallpox, Influenza and Measles and the consequences that these diseases had on the Native American populations that existed on the North American continent. Students will also be able to identify the Europeans who were involved in the Age of Exploration as well as the countries that they represented. In addition, students will be able to identify the methods of transmission or spreading of Smallpox, Influenza and Measles throughout the continent. The main focus of the unit will be the causes and effects of the Columbian Exchange. This exchange helped to fuel the distribution of animals, food products, culture and most importantly disease from Europe to the continent of North America. Students will primarily focus on the diseases of Small pox, Influenza and Measles.

## Background:

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The primary goal of the unit is to focus on the European and American Exchange. The secondary goal of the unit is to teach students about the diseases of Influenza, Smallpox and Measles and their effect on the Native American population in North America. During medieval times, Europeans interpreted the Black Plague as a punishment from God for sins made by men. Fear and guilt became as much a part of the culture as death itself. People did not understand the causes of the problem and made it worse by not planting crops and using alcohol excessively. The illnesses that were prevalent in Europe ravaged the continent until the end of the seventeenth century. The Renaissance evolved as a means to combat the ignorance that had languished since medieval times. Once bacteria had been discovered, then scientists were able to link them and other organisms to the concept and formation of disease.<sup>1</sup>

Portugal, Spain, England, France and the Netherlands all played pivotal roles in the Age of Exploration. Portugal and Spain were the most active explorers of all the European nations. Prince Henry and Ferdinand and Isabella of Spain were instrumental in the support of exploration. It is worthy to note that the work of Prince Henry among others was dependent upon the learning and research of the Egyptians and Phoenicians. However, the explorer that has received the majority of the credit and fame is Christopher Columbus. The reason why I focus on Columbus is due to the fact that the exchange of animals, plants, agriculture and most importantly disease is historically known as the "Columbian Exchange." The exchange that occurred between the Old World and the New World is what effectively impacted the lives of futures of Native peoples on the North American continent.<sup>2</sup>

Disease can be characterized as any harmful change in the functions of the human body or any of its organs. Disease has played an important role in the development of human societies. Disease has transformed the way continents and people have developed over time. In fact much time has been spent trying to understand and control the various diseases that have affected human beings over time.

According to Ramenofsky, the three main diseases that have impacted the development of the North American Continent are Influenza, Smallpox and Measles. During my research, I have learned the viruses of Influenza and Measles can infect other hosts besides human beings. That is these viruses can live outside of

the human body by affecting other animals. Conversely, smallpox virus requires human hosts for survival. In its enthusiasm, the organism often kills its human host. This pestilence creates its own predicament: it requires new hosts at regular intervals. The various influenza viruses must likewise move on, for if their victims survive, they enjoy a period of immunity lasting a few weeks or more.<sup>3</sup>

Influenza is a contagious infection that primarily affects the respiratory tract. Influenza is caused by a virus transmitted from one person to another in droplets coughed or sneezed into the air. It is characterized by cold like symptoms plus chills, fever, headaches, muscle aches, and fatigue. Most people recover completely in about a week. But some people are vulnerable to complications such as bronchitis and pneumonia.<sup>4</sup>

Smallpox is a highly contagious viral disease that is often fatal. The disease is chiefly characterized by a skin rash that develops on the face, chest, back, and limbs. Over the course of a week the rash develops into pus-filled pimples resembling boils. In extreme cases the pimples run together usually as an indication of a fatal infection. Death may result from a secondary bacterial infection of the pustules, from cell damage caused by the viral infection, or from heart attack or shock. In the latter stages of nonfatal cases, smallpox pustules become crusted, often leaving the survivor with permanent, pitted scars. An infected person spreads virus particles into the air in the form of tiny droplets emitted from the mouth by speaking, coughing or simply breathing. The virus can then infect anyone who inhales the droplets. By this means, Smallpox can spread extremely fast from person to person. <sup>5</sup>

Measles are an acute and highly contagious fever producing disease caused by a virus. Measles is characterized by small red dots appearing on the surface of the skin and irritation of the eyes. Coughing and a runny nose are additional symptoms. Twelve days after first exposure, the fever, sneezing, and runny nose will begin to appear. Coughing and swelling of the neck glands often follow. Four days later, red spots appear on the face or neck and then on the trunk and limbs. In two or three days the rash subsides and the fever falls; some peeling of the involved skin areas may take place. Infection of the middle ear may also occur. <sup>6</sup>

According to Loewen, the original Native Americans entered the continent during the ending of the Ice Age. The temperatures were very cold and acted like a decontamination chamber. As Native Americans entered the continent, bacteria and microbes that need warmer temperatures to survive were probably destroyed.

During the Age of Exploration, the Native people were once again introduced to bacteria and microbes that they had never experienced. The unit will focus on the impact and the consequences of the Columbian Exchange. Students will also be able to identify and explain the effects of the Columbian Exchange on the populations of the Native Americans. In addition, students will also be able to identify and explain the role that Smallpox, Measles and Influenza played in the shaping of the North American continent. The North American continent would be transformed because the settlers not only survived immigrating to North America, but they also reproduced and established permanent settlements in various regions. Moreover, the impact of disease allowed the settlers to more easily compete with Native Americans for the lands, minerals and resources that they were so aggressively seeking.

## Essential Questions:

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What are bacteria?

What is a virus?

How are bacteria different from viruses?

How is disease spread?

How do bacteria cause disease?

What long term effects did Smallpox, Measles and Influenza have on the Native American populations?

Which disease was more prevalent in North America?

How has Europe changed the world?

Why does conflict occur among people of different cultures?

How does exploration create progress?

How did exploration impact the lives of Native Americans?

Is change worthwhile?

What is the human response at the end of the Columbian Exchange?

## Strategies:

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While teaching the unit on Europe in World Geography and Cultures, I will use this unit as a means of teaching about the role of medicine and how it evolved during the Italian Renaissance. Moreover, the purpose for the unit is to introduce the concept of bacteria and viruses how diseases are formed.

Vocabulary words will be defined, written in a complete sentence and illustrated via the Marzano, Pickering and Pollock process. The vocabulary work will be completed via a graphic organizer that will become a journal or collection of all words defined in this process.

During the inquiry process, the teacher will instruct students to write down any vocabulary words that are unfamiliar. Once the words have been written, the teacher will instruct the students to define the vocabulary words. Then, the teacher will instruct the students to reread the paragraphs. The primary reason why reading comprehension is difficult is due to the fact that students have limited vocabulary skills.

While teaching the unit on Native Americans in United States History, I will use the unit as a means of teaching about how Native American populations in America were affected by disease due to the Age of Exploration. Disease literally reduced the populations of native people in this country. The teacher will apply the same teaching strategies with the eighth graders from the seventh grade unit.

## **Learning Objectives:**

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Students will use chronological thinking by developing a timeline of exploration by countries and their explorers.

Students will summarize a primary source selection from the Age of Exploration.

Students will compare and contrast the differences between bacteria and a viruses.

Students will be able to locate on a map the continents of Europe and North America, the Pacific and Atlantic Oceans, as well as rivers and landforms.

Students will be able to determine direction of north, south, east and west.

Students will be able to compare and contrast the cultures of Native Americans and Europeans.

Students will analyze and identify the long term effects that viruses had on the populations of Native Americans.

Students will identify the long term effects of the Columbian Exchange on the continents of Europe and North America.

Students will identify and define the properties of the viruses that cause the diseases Influenza, Smallpox and Measles.

Students will use appropriate primary sources and present concrete examples.

Students will demonstrate clarity of ideas and expression while using information from a variety of sources

Students will present both sides of the conflict between Europeans and Native Americans.

Students will describe the contributions to science of the Renaissance and the Age of Exploration to the modern world.

Students will identify the reasons why Native Americans were susceptible to the viruses that the Europeans brought with them to the new world.

## Vocabulary:

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Contagious Cell

Immunity Organism

Circumnavigate Plagues

Renaissance Genocide

Microbe Latitude

Longitude Culture

Disease Natural Resources

Expedition Navigation

Exploration Explorers

Renaissance Transmission of Culture

Transmission of disease Epidemic

Conflict Pestilence

Hosts Indigenous

Microbes Immunity

## Overview:

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The dawn of the Italian Renaissance marked the end of the Middle Ages in Europe. The word 'renaissance' means re-birth. It was a period when people re-discovered learning and looked back to the classical civilizations of Rome and Greece for their inspiration. It was an exciting time of new inventions and amazing discoveries, magnificent buildings and beautiful art. People were changing their attitudes towards themselves and the world around them. The development of printing in Germany meant that this new Renaissance culture spread quickly throughout Europe. The Renaissance in Italy was made possible by the country's wealth. Whereas most people in Europe still worked on the land, Italy was a prosperous, international trading centre, employing bankers, merchants and lawyers. These people could afford to build fine houses, buy books and employ artists and musicians. Renaissance men and women believed that human life was both interesting and extremely valuable, and tried to develop all their talents. They were full of admiration for the wide-ranging talents of 'universal men' such as Leonardo da Vinci, who is perhaps most famous as the painter of masterpieces like the Mona Lisa and The Last Supper. However, Leonardo's skills and interests stretched far beyond painting. He was fascinated by how and why things worked, and studied engineering, anatomy and

botany as well as architecture, physics and meteorology. He made great advances in science and learning, many of which were years ahead of his time. From his detailed notebooks came designs for helicopters, tanks and submarines. Leonardo da Vinci's curiosity and fascination for the world around him, as well as his personal achievements made him a fine example of the Renaissance spirit and culture. The unit will give students the experiences of the Renaissance and help them to connect the achievements of the time period to the modern world.

## **Lesson Plans:**

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### **7th Grade World Cultures and Geography Lessons: (4 Parts)**

#### **The Italian Renaissance**

The students will be presented with a list of resources (textbook, handouts and primary source documents) which will give students the informational background necessary to determine the people, places and events that transpired during the Italian Renaissance.

As each class unfolds, whatever classroom assignments are incomplete will be done for homework.

#### *Learning Activities:*

The learning activity scenario would be for students to write the vocabulary words in their journals. The students will then put them aside and finish for homework. The teacher will review the vocabulary words as the unit progresses. The students will complete the vocabulary journals for homework based on the Marzano, Pickering and Pollock process. During the course of three to four class lessons, the students will read a handout entitled "Italian Renaissance." Teacher and students will read and underline the key figures who are involved. Then students will complete reading comprehension questions located on the handout. Next, students will read pages 301-304 in the World Cultures and Geography textbook and complete a Renaissance Accomplishments spider diagram. Students will then read a handout entitled "Scientific Thought: Renaissance". Students will then read a primary source document regarding the invention of the microscope and its effect on modern medicine. Last, students will then watch a video from [www.unitedstreaming.com](http://www.unitedstreaming.com) which will give them information regarding the Italian Renaissance and take notes on the video.

#### **Overview:**

Today's world is a very small place, and we know a lot about the world in which we live and its inhabitants. However, this was not always the case. There was a time in history, when human beings only knew of the European continent and very little beyond that. This lack of knowledge was to change with the Age of Discovery. This Age of Discovery began in 1400, and it was to take us around the world, discovering new and exciting places. Back in 1400, travel was very difficult and dangerous. Most people could not read or write. There were few maps available to travelers and technology was not very advanced. All these factors added to the difficulty of traveling, and as a result people really only had knowledge of their own immediate area. However, some people did still manage to explore despite these obstacles! The Vikings went out to America and briefly lived there, and some merchants from Venice had managed to travel to China prior to 1400.

As a result of the European exploration of the "New World" many people began immigrating there for religious freedoms, political freedoms and economic opportunities.

The enormous European impact on the Americas is still obvious today in languages and cultures, as well as in religious and political beliefs

### **Age of Exploration: Spain**

The Christian missionaries who accompanied the conquistadors and settlers established mission towns throughout the Spain's new world empire and played an important role in converting the Native Americans to Christianity as well as teaching them European methods of producing agriculture.

### **Age of Exploration: England**

Spain and Portugal led the Age of Exploration. However, England came to dominate the continent of North America. During the settlement process, eighty percent of the people living in the original thirteen colonies along the east coast were from England. These original thirteen colonies became known as the United States of America in 1776 at the advent of the American Revolutionary War.

America was ultimately influenced by The "Columbian Exchange" a phrase coined by historian Alfred Crosby which describes the interchange of plants, animals, and diseases between the Old World and the Americas following Columbus's arrival in the Caribbean in 1492. For reasons beyond human control, rooted deep in the divergent evolutionary histories of the continents, the Columbian Exchange massively benefited the people of Europe and its colonies while bringing catastrophe to Native Americans.

## **Age of Exploration:**

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### **Learning Activities:**

- During the course of four to five class lessons, the teacher will present the handout entitled "Introduction to the Age of Discovery". Students will identify the reasons for exploration. The students will underline the key figures who are involved. The teacher will then present two PowerPoint Presentations. The first is entitled "Glory, God or Gold". The second is entitled "Colonization of the New World 1600- 1750". The teacher will place the slide shows on the screen via the video projector. The students will have copies of the two slide shows in printed handout form. Once the two presentations have been read, the students will answer the cause and effect comprehension questions located on the last slide of each presentation.
1. Next, the teacher will present the students with primary source documents from Columbus, Prince Henry, Magellan and Vasco Da Gama. The students will summarize the documents. The students will read pages 307-311 in World Cultures and Geography textbook and complete the main idea questions on page 311. Students will then create a timeline of European explorers and their routes. Last, students will watch a video from [www.unitedstreaming.com](http://www.unitedstreaming.com) which will list the three explorations of Prince Henry, Magellan and most importantly Christopher Columbus along with the results of the Columbian Exchange. The students will take notes on the video.



The students will be presented with a list of resources (textbook, handouts and primary source documents) which will give students the informational background necessary to determine the causes and effects of viruses and identification of Smallpox, Influenza and Measles. During this phase of the unit, the teacher and students will utilize the computer laboratory and media center. The Library Media Specialist will assist with this portion of the unit.

Diseases have diverse causes, which can be classified into two broad groups: infectious and noninfectious. Infectious diseases can spread from one person to another and are caused by microscopic organisms that invade the body. Noninfectious diseases are not communicated from person to person and do not have, or are not known to involve, infectious agents.

Transmission of disease varies. Pathogens can be spread through direct contact or via air. Pathogens leave the first person through body openings, mucous membranes, and skin wounds, and they enter the second person through similar channels. For example, the viruses that cause respiratory diseases such as influenza and the common cold are spread in moisture droplets when an infected person coughs or sneezes. A hand that was used to cover the mouth while coughing contains viruses that may be passed to doorknobs, so that the next person to touch the doorknob has a chance of picking up the infectious agent. Other pathogens involve an intermediary carrier, such as an insect that vector transmits the pathogen from person to person as it feeds (e.g., mosquito).

The viruses of Smallpox, Influenza and Measles are the focus of the unit. These diseases primarily affected the development of the continent of North America. Students will need to know the difference between bacteria and viruses and how pathogen transmission occurs.

## **Viruses: Smallpox, Influenza and Measles:**

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### **Learning Activities:**

This is an inquiry based lesson. The students will become responsible for their own learning. This lesson will begin in the Media Center. The teacher will be assisted by the school librarian. Students will bring notebooks and journals to the library media center. The media specialist will load the MSN Encarta encyclopedia onto each computer. Students will use the online encyclopedia as well as the Internet (teacher will assign appropriate websites. Students will not use Google, Yahoo or any other search engine during this process) to identify the viruses of Smallpox, Influenza and Measles. The students will classify information using a three column graphic organizer for details regarding each virus. Students will use Internet as well as MSN Encarta to identify the properties of bacteria and viruses. The students will take detailed notes while researching information. Students will write any vocabulary words that are unfamiliar into journals. Then, students will use vocabulary and reading comprehension strategies in order to aid comprehension and research. Students will determine the differences between bacteria and viruses. Students will then use Internet and primary source documents provided by instructor in order to determine the cause and effects of disease from Europe to North America. Students will identify methods of transmission of viruses from Europeans to Native Americans. Teacher will then collect each journal and notebook from students in order to determine success with taking the appropriate notes and vocabulary strategy. Students will then watch a video from [www.unitedstreaming.com](http://www.unitedstreaming.com) which will give detailed analysis of the concepts of infectious disease. Students will

take notes on the video.

The students will be presented with a list of resources (textbook, handouts and primary source documents) which will give students the informational background necessary to determine the relationship between The Columbian Exchange with the continents of Europe and North America.

### **Overview:**

Native Americans are people who are indigenous to the continent of North America. These Native people lived, cultivated agriculture and created a culture that was enjoyed by various tribes throughout the region prior to the arrival of the Europeans in the fifteenth century.

Historians and scientist have debated long and hard concerning the beginnings of human history. Archeological data suggests that the large supercontinent Pangea, broke apart which spawned the seven continents that exists today. In addition, as far as the continent of North America is concerned, scientists and historians agree that ancient ancestors of modern Native Americans crossed a land bridge that connected Northeast Asia to the continent of North America. Historians and scientists agree that these people migrated to the continent of North America prior to the arrival of the last Ice Age.

Native American cultures developed differently across the continent. . Due to necessity, they were skilled at using natural resources and adapting to differing climate regions within the continent. As European settlers began to arrive on the continent in the fifteenth century, Native Americans were faced with many different challenges. Native people had to learn to coexist with Europeans. Trade networks were established and many Native Americans began adopting various types of European technologies. Many more faced generations of upheaval and disruption as Europeans, and later British settlers who became Americans and Canadians, took Native American lands and tried to destroy their ways of life. The purpose of the unit is to teach students about the impact of European colonization on the lives of the indigenous Native American populations on the continent of North America.

## **Native Americans:**

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### **Learning Activities:**

The teacher will write two questions on the board "What were the geographical, economic, technological, personal and political factors that led to the Age of Exploration? Who was most adversely affected by European Exploration?" Students will formulate an answer in their journals. Teacher will present the handout entitled "Contact: Europe and America Meet 1492- 1673". The teacher will also present the graphic organizers that accompany the reading selection.

Students will complete the graphic organizer labeled "geographic factors, economic factors, technological factors and political factors. The students will provide detailed feedback for each. Then, students will read the Native American journals primary source documents. The teacher will show a PowerPoint Presentation of Native Americans suffering from disease. Students will then read the summary regarding Native Americans and European contact. The teacher will present two PowerPoint Presentations. The first is a mini lesson regarding the cause and effects of the Columbian Exchange. The second presentation is entitled "European

Exploration and the Columbian Exchange." The teacher will place the slide shows on the screen via the video projector. The students will have copies of the two slide shows in printed handout form. Once the two presentations have been read, the students will answer the cause and effect comprehension questions located on the last slide of each presentation. Students will then complete a graphic organizer that asks students to assess the effects of contact on the Native Americans and Europeans between 1492 and 1673. The students will complete a personal narrative worksheet. The task is to write about whether or not European contact was beneficial for Native Americans or not. The answer has to be written with details and examples from documents to support point of view. The students will then watch a video from [www.unitedstreaming.com](http://www.unitedstreaming.com) which will give them information regarding the effects of disease on native populations. The students will take notes on the video.

## **Significant Task:**

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### **Bacteria and Viruses and The Road to Infectious Diseases**

The students will complete an online web quest that will teach them the origins, symptoms and treatment for viruses. The teacher will assign the viruses of Smallpox, Measles and Influenza as the viruses for study.

## **Introduction:**

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Do you ever wonder why you get sick and others remain healthy? Do you remember sitting in class trying to stay awake after taking DayQuil, feeling achy, head pounding and nose all stuffed up, while other students around you are wide awake and feeling great? While you are sitting there feeling miserable, you may have asked yourself these questions-just how and why are you the lucky one to get sick? This web quest will lead you on a journey through the bacterial and viral world of infectious diseases and help you to answer those nagging questions. You will also discover just how essential bacteria and viruses are for human life, and what happens when they run amok in the human body.

## **Task:**

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As a third year student at Christopher Columbus Medical School, you will assume the role of an epidemiologist-in-training. You will explore the wonderful world of bacteria and viruses and the role they have in causing diseases, as you study, conduct an experiment and create a "Wanted " poster of an infectious disease. Each group will be assigned an infectious disease by the teacher to research. Some of these infectious diseases will be bacterial in nature, while others will be viral.

## Process:

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1. Choose a virus (Smallpox, Measles and Influenza)

Have your virus selection approved by the teacher.

- Write a two page report on the virus you selected. Your report is to include history, replication, mode of transmission and effects on the host organism of a virus. The presentation must have three sources which are properly footnoted including the website that has been used.
- 2.
  3. Draw a picture of your virus on a poster board.
  4. Give an oral presentation, in your words, to the class.
  5. Students will complete a graphic organizer of each virus

## Influenza

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<b>About how many people die each year of the flu?</b>
<b>What animal may be infected with both human and bird flu?</b>
<b>What are the symptoms of the flu?</b>

## Smallpox

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<b>When was the last reported case of smallpox?</b>
<b>What are the signs and symptoms of smallpox?</b>
<b>What causes smallpox?</b>

## Measles

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<b>About how many people die each year from Measles?</b>
<b>What animal may be infected with Measles?</b>
<b>What are the symptoms of the Measles?</b>

## Resources:

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Bacteria sites:

<http://www.ucmp.berkeley.edu/bacteria/bacteria.html>

<http://www.ou.edu/class/pheidole/bacteria.html>

<http://www.bacteriamuseum.org/>

[www.microbeworld.org/](http://www.microbeworld.org/)

<http://www.cdc.gov/>

<http://www.enwikipedia.org>

<http://www.enchantedlearning.com>

<http://www.cdc.gov/ncidod/index.htm>

Virus sites:

<http://www.howstuffworks.com/virus-human.htm>

[http://www.virology.net/Big\\_Virology/BVirusList.html](http://www.virology.net/Big_Virology/BVirusList.html)

[www.microbeworld.org/](http://www.microbeworld.org/)

<http://www.cellsalive.com/phage.htm>

<http://www.enchantedlearning.com>

Categories	4	3	2	1	Score
<b>Neatness</b>	The poster is exceptionally attractive in design, neatness and layout.	The poster is attracted in design, neatness and layout.	The poster is acceptably attractive but messy.	The poster is very poorly designed and extremely.	
<b>Graphics</b>	All graphics used are appropriate to poster design and very creative.	Two or three of the graphics are creative and original.	The graphics are based on the work of other students.	The graphics are lacking or not appropriate to the poster design.	
<b>Grammar</b>	There are no errors in grammar on the poster.	There is one grammatical error on the poster.	There are two grammatical errors on the poster.	There are more than two grammatical errors on the poster.	
<b>Required Information</b>	The poster contains all required information about the disease.	The poster contains three required facts about the disease.	The disease contains only two required facts about the disease.	There are no required facts about the disease on the poster.	
<b>Collaborative Work</b>	Group worked well as a team. Focused on getting the project finished and never distracted others.	Group worked well as a team most of the time. Usually focused on getting the project finished. Never distracted others.	Group worked well as a team sometimes. Had difficulty staying focused and occasionally distracted others.	Did not use time wisely and had difficulty staying focused or often distracted others.	
<b>Total Points</b>	20-18 = A 17-15 = B 14-11 = C 10-7 = D				

## Evaluation:

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## Rubric for Wanted Poster

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Name: \_\_\_\_\_

Date: \_\_\_\_\_

Period: \_\_\_\_\_

## Student Learning Objectives:

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1. The students will learn who the first Native Americans were and how they developed different ways of life in response to different climates and land resources.
2. The students will learn about the achievements of the Maya, Aztec and Inca empires.
3. The students will learn how several European nations established sea trade with Asia through the efforts of a few bold explorers.
4. The students will recognize the importance of trade routes between Europe and Asia.
5. The students will identify Portuguese and Spanish Explorers and routes.
6. Students will compare and contrast the differences between bacteria and viruses.
7. Students will identify and define the properties of the viruses known as Influenza, Smallpox and Measles.
8. Students will use appropriate primary sources and present concrete examples.
9. Students will identify the long term effects of the Columbian Exchange on the continents of Europe and North America.
10. Students will identify the reasons why Native Americans were susceptible to the viruses that the Europeans brought with them to the new world.
11. Students will analyze and identify the long term effects that viruses had on the populations of Native Americans.

## Vocabulary:

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Bacteria Measles

Columbian Exchange Smallpox

Virus Migrate

Indigenous Genocide

Influenza Civilization

Nomad Pestilence

Imperialism Circumnavigate



Host Renaissance

Contagious Microbe

Immunity Cell

Organism Empire

Plagues Disease

Microbes Expedition

Migrate Exploration

Culture Trade

Conquest Transmission of Culture

Commerce Transmission of Disease

Natural resources Conflict

Navigation Hosts

Explorers Epidemic

## 8th Grade United States History Lessons:

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The students will be presented with a list of resources (textbook, handouts and primary source documents) which will give students the informational background necessary to determine the people, places and events that transpired during the settlement of North America. As each class unfolds, whatever classroom assignments are incomplete will be done for homework.

### **Overview:**

Native Americans are people who are indigenous to the continent of North America. These Native people lived, cultivated agriculture and created a culture that was enjoyed by various tribes throughout the region prior to the arrival of the Europeans in the fifteenth century.

Historians and scientist have debated long and hard concerning the beginnings of human history. Archeological data suggests that the large supercontinent Pangea, broke apart which spawned the seven continents that exists today. In addition, as far as the continent of North America is concerned, scientists and historians agree that ancient ancestors of modern Native Americans crossed a land bridge that connected Northeast Asia to the continent of North America. Historians and scientists agree that these people migrated to the continent of North America prior to the arrival of the last Ice Age.

Native American cultures developed differently across the continent. . Due to necessity, they were skilled at

using natural resources and adapting to differing climate regions within the continent. As European settlers began to arrive on the continent in the fifteenth century, Native Americans were faced with many different challenges. Native people had to learn to coexist with Europeans. Trade networks were established and many Native Americans began adopting various types of European technologies. Many more faced generations of upheaval and disruption as Europeans, and later British settlers who became Americans and Canadians, took Native American lands and tried to destroy their ways of life. The purpose of the unit is to teach students about the impact of European colonization on the lives of the indigenous Native American populations on the continent of North America.

## **Native People of the Americas:**

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### **Learning Activities:**

The students will write down the vocabulary words that are associated with the unit and write them in their vocabulary journals. The students will complete the vocabulary journals for homework based on the Marzano, Pickering and Pollock process. The teacher will distribute the handout entitled "The First Americans." The students will read and answer the reading comprehension questions at the bottom of the page. The teacher will speak about the land bridge that early people crossed to reach North America. The teacher will present the PowerPoint Presentation "The Invention of Agriculture." The teacher will place the slide show on the screen via the video projector. The students will have copies of the slide show in printed handout form. Once the presentation has been read, the students will answer the cause and effect comprehension questions located on the last slide of the presentation. The teacher will present the word document "Invention of Agriculture." It is a diagram based document. The students will complete page 13 in the student workbook. It is a graphic organizer that categorizes early people and their accomplishments. The students will write a summary paragraph consisting of 5-7 sentences about what they have learned about early people in the Americas. The students will watch a video from [www.unitedstreaming.com](http://www.unitedstreaming.com) that will show information regarding native people of the Americas. The students will take notes on the video.

## **Ancient Civilizations:**

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### **Learning Activities:**

The teacher will write these questions on the board. "What do you think about the town or city in which you live? Why do you live there? Why do you think that early people settled in areas of good soil and abundant water? The students will formulate answers in their journals. The students will read pages 16-20 in U.S. History textbook. The students will complete pages 14-15 in student workbook. These are graphic organizers summarizing and detailing information about the Aztec, Inca and Mayan civilizations. The teacher will present a PowerPoint Presentation based on the hierarchy and requirements of early civilizations. The teacher will place the slide show on the screen via the video projector. The students will have copies of the slide show in printed handout form. Once the presentation has been read, the students will answer the cause and effect comprehension questions located on the last slide of the presentation.

The students will watch a video from [www.unitedstreaming.com](http://www.unitedstreaming.com) which will give detailed information regarding the lives of the Aztec, Inca and Mayan people. The students will take notes on the video.

### **Overview:**

Today's world is a very small place, and we know a lot about the world in which we live and its inhabitants. However, this was not always the case. There was a time in history, when human beings only knew of the European continent and very little beyond that. This lack of knowledge was to change with the Age of Discovery. This Age of Discovery began in 1400, and it was to take us around the world, discovering new and exciting places. Back in 1400, travel was very difficult and dangerous. Most people could not read or write. There were few maps available to travelers and technology was not very advanced. All these factors added to the difficulty of traveling, and as a result people really only had knowledge of their own immediate area. However, some people did still manage to explore despite these obstacles! The Vikings went out to America and briefly lived there, and some merchants from Venice had managed to travel to China prior to 1400.

As a result of the European exploration of the "New World" many people began immigrating there for religious freedoms, political freedoms and economic opportunities.

The enormous European impact on the Americas is still obvious today in languages and cultures, as well as in religious and political beliefs

### **Age of Exploration: Spain**

The Christian missionaries who accompanied the conquistadors and settlers established mission towns throughout the Spain's new world empire and played an important role in converting the Native Americans to Christianity as well as teaching them European methods of producing agriculture.

### **Age of Exploration: England**

Spain and Portugal led the Age of Exploration. However, England came to dominate the continent of North America. During the settlement process, eighty percent of the people living in the original thirteen colonies along the east coast were from England. These original thirteen colonies became known as the United States of America in 1776 at the advent of the American Revolutionary War.

America was ultimately influenced by The "Columbian Exchange" a phrase coined by historian Alfred Crosby which describes the interchange of plants, animals, and diseases between the Old World and the Americas following Columbus's arrival in the Caribbean in 1492. For reasons beyond human control, rooted deep in the divergent evolutionary histories of the continents, the Columbian Exchange massively benefited the people of Europe and its colonies while bringing catastrophe to Native Americans.

## **Age of Exploration:**

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### **Learning Activities:**

Scenario: you are asked by the President of the United States to train to become an astronaut so that you could visit the planet Mars. Would you go? Would you complete the training required to go? What type of fears

would you have? Students will formulate an answer in journals. Students will share answers with the class as a whole. Using the map of page 35 students will examine the locations of the European trade routes and speculate why traders would want trade routes that use water passages instead of land passages. Why were the Italian cities of Genoa and Venice the headquarters for many European traders? Students will answer questions and skill builder on a separate sheet of paper. The teacher will present a T Chart. The chart will focus on the pros and cons of traveling by land or sea. The teacher will write the responses on the board. The students will be placed in groups of three -four students. The students will read the primary source documents from Prince Henry, Columbus, Magellan, Vasco Da Gama and Bartolomeu Dias. Each group will summarize the documents and share with the class as a whole. Students will read pages 35-36 in textbook and complete the Chart Check on page 39. The teacher will write two questions on the board "What were the geographical, economic, technological, personal and political factors that led to the Age of Exploration? Who was most adversely affected by European Exploration?"

Students will formulate an answer in journals. Teacher will present the handout entitled "Contact: Europe and America Meet 1492- 1673". The teacher will also present the graphic organizers that accompany the reading selection. Students will complete the graphic organizer labeled "geographic factors, economic factors, technological factors and political factors. The students will provide detailed written explanations for each column in the graphic organizers. Then, students will read the Native American journals primary source documents. Students will then read the summary regarding Native Americans and European contact. The teacher will present two PowerPoint Presentations. The first is a mini lesson regarding the causes and effects of the Columbian Exchange. The second presentation is entitled "European Exploration and the Columbian Exchange." The teacher will place the slide shows on the screen via the video projector. The students will have copies of the two slide shows in printed handout form. Once the two presentations have been read, the students will answer the cause and effect comprehension questions located on the last slide of each presentation. Students will then complete a graphic organizer that asks students to assess the effects of contact on the Native Americans and Europeans between 1492 and 1673.

The teacher will present the essay framework for Christopher Columbus voyages. Students will determine if his voyages were a success or if they were a failure. The essay has to be five paragraphs and persuasive. Once the rough draft is complete, the students will type the essay in the computer lab and the teacher will post them in room on bulletin board.

The students will be presented with a list of resources (textbook, handouts and primary source documents) which will give students the informational background necessary to determine the causes and effects of viruses and identification of Smallpox, Influenza and Measles. During this phase of the unit, the teacher and students will utilize the computer laboratory and media center. The Library Media Specialist will assist with this portion of the unit.

## **Viruses: Smallpox, Influenza and Measles:**

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### **Learning Activities:**

This is an inquiry based lesson. The students will become responsible for their own learning. This lesson will begin in the Media Center. The teacher will be assisted by the school librarian. Students will bring

notebooks and journals to the library media center. The media specialist will load the MSN Encarta encyclopedia onto each computer. Students will use the online encyclopedia as well as the Internet (teacher will assign appropriate websites. Students will not use Google, Yahoo or any other search engine during this process) to identify the viruses of Smallpox, Influenza and Measles. The students will classify information using a three column graphic organizer for details regarding each virus. Students will use Internet as well as MSN Encarta to identify the properties of bacteria and a virus. The students will take detailed notes while researching information. Students will write any vocabulary words that are unfamiliar into journals. Then, students will use vocabulary and reading comprehension strategies in order to aid comprehension and research. Students will determine the differences between bacteria and a virus. Students will then use Internet and primary source documents provided by instructor in order to determine the cause and effects of disease from Europe to North America. Students will identify methods of transmission of viruses from Europeans to Native Americans. Teacher will then collect each journal and notebook from students in order to determine success with taking the appropriate notes and vocabulary strategy. Students will then watch a video from [www.unitedstreaming.com](http://www.unitedstreaming.com) which will give detailed analysis of the concepts of bacteria and disease. Students will take notes on the video.

## Significant Task:

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Goal: To determine whether or not the Columbian Exchange was beneficial to the continent of North America.

Students are to investigate what happened to North American tribes as a result of the viruses causing the diseases Influenza, Smallpox and Measles. The students have to defend their position by:

- °x Creating a Multi- Media Presentation
- °x Creating and participating in a debate
- °x Writing and creating a newspaper editorial
- °x Creating a museum of Native American artifacts
- °x Creating a museum of European artifacts
- °x Creating a Tri-Fold Board

The teacher will enable students to work with and learn from each other. I will do this in a think/pair/share format. Students will be placed in groups of two or three maximum. Each group will have a choice of what type of product to choose from. They are limited to the choices listed above. However, if a group has a reasonable idea regarding their output, then I am more than willing to listen. Each group must choose a side or point of view to present. Native American or European point of views will be presented via the final product or body of work. The teacher will present the packets and primary source documents to each group along with a body of teacher selected websites as they also use the Internet for the project. The teacher will provide each group with the appropriate rubric that matches their choice of project.

## Annotated Bibliography

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### Books:

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Crosby. 1972. *The Columbian Exchange*. Greenwood Press Westport Connecticut

*The Columbian Exchange* written by Alfred Crosby is a publication that traces the migration of Native Americans across Beringia, using blood types as a means to illustrate the homogeneity of the population. Most importantly, this population remains isolated from the communicable disease pools that periodically decimate Afro Eurasians following the development of agriculture and cities. As European conquistadors and missionaries arrived in the fifteenth century, epidemics of Eurasian diseases spread like wildfire through Native populations often travelling faster than the Europeans themselves. This demographic collapse created the world's greatest labor shortage which set the stage for the slave trade.

James. 1995. *Lies My Teacher Told Me*. The New Press New York.

*Lies My Teacher Told Me* written by James Loewen is a publication that offers an insightful critique of twelve American history textbooks. The publication offers a brilliant synopsis of what is currently wrong with American history classes and textbooks alike. Loewen insists that the bland Eurocentric viewpoint of history is boring and mostly irrelevant to most elementary, middle and high school students lives. In order to make learning more relevant, Loewen insists that publishers, teachers and parents alike should highlight the drama that is inherent in history by presenting students with different viewpoints and stress that history is an ongoing process, not merely a collection of facts that are often misleading.

Sherman. 2006. *The Power of Plagues*. ASM Press Washington D.C.

*The Power of Plagues* written by Irwin Sherman describes the nature and evolution of human diseases. The book focuses on how scientists discovered the causes of infectious diseases and gives examples of how meaningful controls were developed in order to curb outbreaks and transmission of infections. The book also speak about the correlation between plagues and cultures and details the manner in which modern society has been influenced by infectious diseases. The work mentions in clear detail the current infectious diseases that are a large part of American society such as AIDS, cholera, tuberculosis, influenza and West Nile Virus. The book is a survey of major diseases, their biology, their transmission, and their major historic effects.

### Popular Article:

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A. Ramenofsky. 1992. *Death by Disease*. *Archeology* 1992 Vol. 45, No. 2, pp. 47-49

*Death by Disease* is a journal article written by Ann F. Ramenofsky that chronicles the exploits of the European explorers and the causal effects on various Native American populations. In the journal article, she has identified Smallpox, Influenza and Measles as the three main diseases that decimated the Native American populations. The majority of her conclusions are based upon the primary source documents written by the explorers themselves.

## Connecticut State Standards: Grade 7 Grade 8

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Compare and contrast historical events in other nations with those in American history (e.g., settlement, revolution, constitution).

Compare and contrast the impact of technology on the environment at different times and in different places.

Analyze examples where technological change influenced migration patterns in a region/country

Evaluate the positive and/or negative impacts of movements of large groups of people on both people and a nation/region

Interpret primary and secondary sources to determine accuracy and validity.

Analyze and explain the long term effects of the Columbian Exchange on the continent of North America.

Analyze and explain the long term effects of disease on the populations of various Native American tribes that the Europeans came into contact with.

Analyze the similarities and differences between colonization in the 1600s

Analyze how geography influenced the economic and political development of the United States

Analyze the contributions of and challenges to different cultural/ethnic groups in the United States over time.

Interpret primary and secondary sources to determine accuracy and validity.

Analyze and explain the long term effects of the Columbian Exchange on the continent of North America.

Analyze and explain the long term effects of disease on the populations of various Native American tribes that the Europeans came into contact with.

Analyze and explain the long term effects of the Age of Exploration on the continent of North America

Students will also be able identify the Europeans who were involved in the Age of Exploration as well as the countries that they represented.

Students will be able to identify the methods of transmission or spreading of the Smallpox, Influenza and Measles throughout the continent

## Endnotes

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1 Loewen James, Lies My Teacher Told Me (The New Press New York 1995)

2 Crosby Alfred Jr, The Columbian Exchange (Greenwood Press Westport Connecticut 1972)

3 Ramenofsky Anne, "Death by Disease" , Archeology 1992 Vol. 45, No. 2, pp. 47-49

4 "Influenza," Microsoft? Encarta? Online Encyclopedia 2008

<http://encarta.msn.com> ? 1997-2008 Microsoft Corporation.

5 "Smallpox," Microsoft? Encarta? Online Encyclopedia 2008

<http://encarta.msn.com> ? 1997-2008 Microsoft Corporation.

6 "Measles," Microsoft? Encarta? Online Encyclopedia 2008

<http://encarta.msn.com> ? 1997-2008 Microsoft Corporation.

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