

Oregon Trail Science Lesson, (BME 530)
By: Dinora Conwill

Introduction: This Science lesson is for middle school (6-8th grade) students. It is intended to teach students of the diseases pioneers faced as they traveled westward on the Oregon Trail.

Behavioral Objective: The objective of this lesson is for students to understand the diseases pioneers struggled with, and how they treated them along the Oregon Trail. Students will be able to identify the early symptoms of the disease and understand the importance of preventing diseases through vaccinations.

Standard: PO1. Analyze the risk factors associated with natural and biological hazards.

Anticipatory Set: Agnostic Poem

O-PEN
R-ANGE
E-VERYONE
G-OING
O-VER
N-O-MAN'S

T-ERRAIN
R-EJECTING
A-GONIZING
I-LLNESS
L-OSS

Teacher Input: "Class today we're going to learn about the many diseases that pioneers faced as they journeyed on the Oregon Trail. We're going to begin by reading this poem. (Anticipatory Set). Teacher asks, "Who can tell me why I chose these words for the poem? (Waits for response.) (Teacher feedback.) "Let's read this article about a family's account during their travels". Hands out w/s. Teacher picks random readers. Teacher summarizes article orally.

Modeling the Behavior: Teacher demonstrates how students are to use the story to complete the questions. Teacher does sample problem. "Now I would like for you to work with your class partners to complete the rest of this w/s".

Check for Comprehension: Oral questioning technique throughout the lesson. Teacher walks around to check partner work and give suggestions.

Guided Practice: Students follow teacher's sample problem as she demonstrates.

Closure: Teacher asks different groups for their answers to the w/s and the rest of the students will self-check their own answers. When this is done, the teacher reviews the lesson's objective with students.

Independent Practice: Students will work with previously assigned partners to complete w/s.

Assessment: Student's self-check their answers as teacher questions different groups. At the end, students will place their w/s and article in their Oregon Trail folder and use it as a reference for the unit test.

Materials: Article and w/s.(At the end of this lesson).

Modifications for E.S.L., P.E.P., S.P.E.D.: Simplified terms and definitions as needed, oral summary of article, assigned partners, student self-check.

Technology Integration: Does not apply to this lesson.

Below are articles based on the diseases common to the Oregon Trail.

DISEASES DURING THE OREGON TRAIL

Alkali sickness was one of the many diseases along the Oregon Trail. It was caused by alkali water. In order to cure alkali sickness, you would have to give the person with the disease a dose of vinegar, flour and water, or lard.

Another disease was diphtheria. The cause of diphtheria was cold weather, so it only occurred during the winter months. It also really only happened to children under ten. In order to cure diphtheria, you would need to rest and drink lots of fluids.

Cholera -- Cholera is a disease caused by dirty water. This disease was the main cause of death on the Oregon Trail. It took one third of the people who died on the trail and could kill in less than a day. To cure a person diagnosed with cholera, pioneers gave laudanum and immediate rest. If your supplies do not include laudanum, increase the persons amount of fluid and salt.

Malaria -- Malaria is caused by mosquito bites. If someone gets malaria, pioneers gave quinine. Give the quinine right away or he or she will develop chronic malaria. Rest may also help.

Scurvy is caused by lack of vitamin C in the diet. Most pioneers brought fruits and vegetables to cure the disease. If the fruits and vegetables got rotted, pioneers brought pickles and vinegar to eat.

Measles are highly contagious to children. It is best treated by getting rest and drinking extra fluids. Rubbing aloe on the rash is soothing, but it does little. Measles can turn into pneumonia . Measles are highly contagious to children. It is best treated by getting rest and drinking extra fluids. Rubbing aloe on the rash is soothing, but it does little. Measles can turn into pneumonia if not treated properly. Medical treatment would be needed for curing measles .

Dysentery is characterized by abdominal cramps or pain accompanied by severe diarrhea, perhaps accompanied by blood. Untreated, it can lead to dehydration, blood poisoning and death. It is thought to be caused by contaminated food or water, and may become a chronic condition. The best treatment is rest along with fluid and salt repletion, and a good balanced diet.

Exhaustion is caused by lack of rest. When the pioneers were traveling the Oregon Trail it was important to get a lot of rest. If they didn't rest they would be exhausted. Of course to treat exhaustion back then the early pioneers stopped their wagons and slept the day away! Another treatment was to drink a lot of fluids. You should also keep a cool rag on

your head.

Buried Alive!

At least some of the emigrants who died en route to Oregon were probably buried alive. Why? The survivors were in a hurry.

For many years, cholera ravaged emigrants along the Oregon Trail. Whoever caught it was dead--no cure or treatment existed. Usually, the infected emigrant died in 24 hours or less.

If an entire wagon train stopped for an elaborate funeral, it would slow their progress. The Donner Party tragedy emphasized the urgency of traveling quickly. Too many delays meant the pioneers might not get to Oregon before winter--and then everyone might perish. So on most wagon trains, the burials got shorter and shorter as more and more people died. Some even abandoned the terminally sick by the side of the Trail, where they would eventually die alone. The more humane wagon companies elected a "watcher" to wait with the dying person while the wagons forged ahead. It wouldn't take long for the watcher to catch up; a quick death, after all, was imminent.

What were the dangers on the Oregon Trail?

The first major danger on the Oregon Trail was disease. There was a disease called cholera. It was one of the most deadly diseases on the Oregon Trail.

The dangers were Native Americans. The Native Americans wanted to fight the white people and the Native Americans took scalps.

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The Oregon Trail helped settle the west during the 1800's. Many pioneers and their families set out for a better life in the Oregon Territory, which is now Oregon and Washington. The Oregon Trail was

the only way the pioneers could make the journey out west. The journey was not easy for the families, who had little food, nowhere to sleep, and many diseases to contend with.

The Disease, the Cure

Building Background:

Crossing North America in wagon trains was extremely difficult. The hardships of weather, limited diet, and exhaustion made travelers very vulnerable to infectious diseases such as smallpox, cholera, and dysentery. Smallpox was an especially devastating disease. First brought to the Western Hemisphere by Europeans, smallpox was spread to Native Americans, who had no immunity to the disease. Thousands of Native Americans died after contracting smallpox.

Today, the majority of children are vaccinated or immunized against various infectious diseases. During the early eighteenth century, settlers and Native Americans did not have the advantage of such immunizations (despite the fact that Edward Jenner first demonstrated his smallpox vaccine in 1796).

2. Diseases such as smallpox, cholera, dysentery, and measles were fatal. These diseases spread across North America in part by interaction among settlers and Native Americans.

Wrap-Up:

Share what you have learned about diseases that were once common. Discuss how the history of this country may have been affected by the spread of disease.

Extensions:

- Research an infectious disease that is currently in need of prevention and cure and present a history of any progress toward that goal.
- Locate biographical information about the scientists who have worked to eradicate such diseases as polio, smallpox, tuberculosis, and typhoid.

Name:

Date:

Health Report

1. Disease: List One

2. Symptoms: Describe the symptoms of the disease..

3. Duration: How long does it last? .

4. Treatment: What type of medicine is given to help the sick person?

5. Prognosis (When will the person get better):

6. The Small-Pox vaccine: give a brief history of its development. Include the names and nationalities of the scientist involved in the development.

7. What is the current status of this disease in the United States? In other nations around the world?

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by:Gilly H.

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Michael B.

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