



FEDERAL WAY PUBLIC SCHOOLS

Each Scholar: A voice. A dream. A **BRIGHT** future.

Communicable Diseases CURRICULUM GUIDE

Lessons for 6-12 Science Teachers

Table of Contents

Communicable Diseases Lessons: 6th – 12th Grade..... 3

6th – 12th Grade 4

Communicable Diseases Lesson: 6th – 12th Grade

Communicable Diseases Lesson

6th – 12th Grade

Daily Learning Target/Success Criteria/Language Objective	Aligned Instructional Materials/ Supplemental Resources	Aligned Assessment
<ul style="list-style-type: none"> • LT-I will learn about the spread of diseases. • SC-I can explain information about preventing the spread of disease. 	<ul style="list-style-type: none"> • Spray Bottle with water • Copies of Hand Washing Concept Map • Copies of Hygiene Posters (print a few posters for your classroom) 	<ul style="list-style-type: none"> • Hand Washing Concept Map • <i>Differentiation/Extension:</i> **review individual education support plans for scholars receiving ELL/SSS services

Standard(s):

- **Standard 1:** Students will comprehend concepts related to health promotion and disease prevention to enhance health.
 - Differentiate between communicable and non-communicable diseases. H1.W2.6
- **Standard 2:** Students will analyze the influence of family, peers, culture, media, technology, and other factors on health behaviors.
 - Determine how hereditary factors and health behaviors impact health. H2.W2.6
- **Standard 3:** Students will demonstrate the ability to access valid information and products and services to enhance health.
 - Describe situations that call for expert health resources and services. H3.W4.6
 - Analyze validity and reliability of health and wellness information and products. H3.W4.7
 - Investigate local valid and reliable health and wellness information. H3.W4.8
- **Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.
 - Summarize lifestyle factors to prevent communicable and non-communicable diseases. H7.W2.7a
 - Explain benefits and consequences of various health behaviors. H7.W2.7b
 - Analyze how personal choices contribute to communicable and non-communicable diseases. H7.W2.8a
 - Assess personal health behaviors that reduce or prevent health risks. H7.W2.8b

Lesson Time Frame: 1 class period

Two lesson options are provided. Option 1 requires access to computers for online research.

Option 1: The Great CDC Scavenger Hunt (Centers for Disease Control)

Warm Up:

- Ask students if they have heard about the novel coronavirus or COVID-19
- Ask where they go for information about the disease and what is happening, record their ideas on the board
- Discuss valid and reliable sources, including the principles below. As you discuss, put stars next to information sources that meet these criteria.
 - Valid sources are experts on the topic or include quotes and information from experts on the topic.
 - Reliable sources have the purpose of providing information, not getting you to purchase things, click on links, or hold a specific opinion.
- Introduce the Centers for Disease Control and Prevention, show their main web page (cdc.gov)
 - The Centers for Disease Control is a government organization whose mission is to protect America from health, safety, and security threats – specifically health threats.
 - Check the CDC against the criteria for a valid and reliable source

Differentiation/Extension:

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Activity:

CDC Scavenger Hunt

- Students are given 10 communicable disease items to look for on the Centers for Disease Control and Prevention website. For each question they need to write the answer, and the title of the page where they found the answer.

- Here are the ten items:
 - When are the times that are most important to wash hands?
 - What is the proper way you should wash your hands?
 - Do sanitizers work for all people as tools to kill viruses?
 - Do disinfecting wipes work effectively?
 - Is sneezing and coughing on clothes better than using a tissue paper?
 - How do viruses change?
 - What is the most effective soap for young kids?
 - What is the impact of toilet seats on the spread of communicable disease?
 - What are places that are high risk for contamination?
 - What are places in school that are high risk for contamination?

Differentiation/Extension:

- You may split up the items and do this activity as a jigsaw

Wrap Up:

- Discuss the information that scholars found – what surprised them? What questions do they still have?
- Discuss the importance of finding information from valid and reliable sources, especially when something scary like a virus spreading is going on.

Differentiation/Extension:

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Option 2: Who Gets the Drug?

Warm Up:

- Ask students if they have heard about the novel coronavirus or COVID-19
- Ask what they have heard about how the disease is spread, and what the symptoms are. Correct misconceptions as appropriate.
 - The main symptoms are a dry cough, a fever, and shortness of breath
 - The disease is spread mainly from person-to-person between people who are within 6 feet of each other or through droplets produced when an infected person coughs or sneezes. The droplets can land in the mouths or noses of people who are nearby or possibly be inhaled into the lungs.
- Explain that today students will be thinking like epidemiologists to decide who should get a limited supply of medication to best limit the spread of a fictional disease. This disease and scenario are completely fictional.

Differentiation/Extension:

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Activity:

Who Gets the Drug?

- Read and provide the following scenario for students:
 - There has been an outbreak of a new Type A related virus for which no known human immunity exists. The mortality rate for this infection is 15% of the population. The research section of the Centers for Disease Control and Prevention (CDC) has reported that the most common antiviral medication Tamiflu has been shown to be effective in treating people who have gotten this mysterious virus. There is enough Tamiflu to give to 1/10 of the American population within the next 10 days, and within 2 months there will be enough produced to address the next 40% of the American population. The other 50% of the population will have to wait up to 6 months.
 - You are a member of the Health and Human Services' decision-making staff who is to decide which people will get the available drug immediately and those individuals who would get the next level of anti-viral drugs

available. Your team is to rank order from 1-5 in importance the people who would get the first available dose and those who would get the second available dose. The remaining people would have to wait past the 30-day production period. Those you would leave blank. Provide a reason for each of the groups you select.

- Choose from any of the following groups to rank your order and provide a rationale for your choices:
 - Teachers and other school employees
 - Students between ages 5-18
 - Health care workers in hospitals or clinics
 - State government employees
 - Young children between birth and 5
 - Parents of young children birth to 5
 - Public servants like police and fire
 - Food industry employees
 - President and the Oval Office
 - Center for Disease Control researchers
 - Farm workers
 - Celebrities and Athletes
 - All religious leaders in the country
 - All adults between 20 and 40, determined to be the highest risk for severe symptoms
 - All adults between 40 and 60, determined to be the highest risk for severe symptoms

Sample Response: In the first category our team chose health care workers because these people have to be at the front of people who have gotten the virus and need that urgent medical care. We need to keep them as healthy as possible. In the second category we chose the farmers because they produce foods that people need every day to keep themselves healthy. The last category would be school employees because it is a location where disease is easily spread, so we may have to close the schools.

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Differentiation/Extension:

- You may split up the items and do this activity as a jigsaw

Wrap Up:

- Ask students to share their ranking and discuss the reasoning behind their decisions.
- Discuss why certain groups of people might get more access to medications, vaccines, or treatments, and how the selection of who gets access can help to stop or slow a disease that is spreading in a community.
- Remind students that even though it might be scary to hear news about COVID-19 that experts are working as hard and fast as they can to keep us safe. It is important to look for accurate information, ask questions, and follow the recommendations of the experts working to solve this problem.

Differentiation/Extension:

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Vocabulary:

Disease – an illness or condition that stops the body from working normally

Germ – a tiny organism that causes disease

Hygiene – regular practices for staying healthy. Examples include brushing teeth, flossing, bathing, and washing hands.

Cultural practices and social norms for hygiene can vary significantly between countries, regions, and communities.

Name _____ Date _____ Period _____

CDC Scavenger Hunt

Find the answer to each question below on the Centers for Disease Control and Prevention website (www.cdc.gov). Record the answer to the question, and the title of the web page where you found the information.

1. When are the times that are most important to wash hands?
2. What is the proper way you should wash your hands?
3. Do sanitizers work for all people as tools to kill viruses?
4. Do disinfecting wipes work effectively?
5. Is sneezing and coughing on clothes better than using a tissue paper?
6. How do viruses change?
7. What is the most effective soap for young kids?
8. What is the impact of toilet seats on the spread of communicable disease?
9. What are places that are high risk for contamination?
10. What are places in school that are high risk for contamination?

Who Gets the Drug?

Scenario:

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You are a member of the Health and Human Services' decision-making staff who is to decide which people will get the available drug immediately and those individuals who would get the next level of anti-viral drugs available. **Your team is to rank order from 1-5 in importance the people who would get the first available dose and those who would get the second available dose.** The remaining people would have to wait past the 30-day production period. Those you would leave blank. **Provide a reason for each of the groups you select.**

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