WA State Health Standards	**Standard 1:** Students will comprehend concepts related to health promotion and disease prevention to enhance health. **Standard 2:** Students will analyze the influence of family, peers, culture, media, technology, and other factors on health behaviors. **Standard 3:** Students will demonstrate the ability to access valid information and products and services to enhance health. **Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.	
Learning Outcomes ***Students will…***	**6th grade**	• Differentiate between communicable and non-communicable diseases. H1.W2.6 • Determine how hereditary factors and health behaviors impact health. H2.W2.6 • Describe situations that call for expert health resources and services. H3.W4.6
	7th grade	• 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 validity and reliability of health and wellness information and products. H3.W4.7
	8th grade	• 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 • Investigate local valid and reliable health and wellness information. H3.W4.8
	HS	• Analyze prevention, lifestyle factors, and treatment of communicable and non-communicable diseases. H2.W2.HSa • Assess personal risk factors and predict future health status. H2.W2.HSb • Create a resource that outlines where and how students can access valid and reliable health information, products, and services. H3.W4.HS
Lesson Overview	• Determine how disease prevention can be impacted through personal health behaviors • Determine areas of the school, home and the body that are likely to be contaminated with germs • Determine appropriate media and news resources to access valid information • Hypothesize and create action plans communities can implement to prevent the spread of communicable diseases	

Vocabulary

- **Communicable Diseases** - a disease that can spread from one living thing to another, such as the flu or HIV.
- **Hygiene -** Regular practices for maintaining essential elements of health. Examples included brushing teeth, flossing, bathing, and washing hands. Cultural practices and social norms for hygiene can vary significantly between countries, regions, and communities.
- **Lifestyle factors** - Behaviors that impact health, such as exercise and diet.

Guiding Questions

- Why is it important to get the facts and ask questions about disease prevention?
- In general, what are some health and hygiene practices you should use in order to help prevent the spread of germs?
- Why is it sometimes a good idea to limit the amount of news you watch on issues like communicable diseases?

- **Non-Communicable Diseases** - a disease that cannot be spread from one living thing, or from the environment, to another living thing. Heart disease is an example of a non-communicable disease.
- **Pathogen** - An infectious agent (such as a virus or bacterium) that causes a disease.
- **Risk factors -** Conditions or traits that increase the likelihood that one will develop a disease or infection or experience an injury.
- **Transmission** - The process of spreading something, such as a disease, from one living thing to another.
- **Valid -** Accurate, legitimate, authoritative, and evidence-based information, products, and services.
- **Virus -** A small infectious agent that enters a cell and takes over normal functioning.

- If you're feeling worried about a virus, who could you talk with at home and in school?
- How are science-based websites like the World Health Organization, STAT news and Science News different from general news websites?

Lesson Ideas

6 - 8

Activity: Communicable Disease Prevention

- Students create a hypothesis as to what surface in their school and home are most likely to be contaminated with germs and what part of the body is also the most contaminated.
- Students present their hypotheses written on paper to the rest of the class sharing their rationale.
- Students present some safe behaviors that will eliminate or lessening possible contaminations in their hypothesis.

Sample Response: My hypothesis is that the wrestling mat has the highest bacterial count because a lot of bodies are always on it. As it turns out I was wrong because it is cleaned every day by the custodial staff.

Activity: Avoiding Spread of Disease (small group)

- Students gather information on healthy hygiene behaviors and risks as they relate to positive hygiene behaviors, such as a day at school.
- Students will create a song or poem that shares the information they gathered

Suggested Extension: Students might develop a peer education project to teach their hygiene songs / poems to students or family members.

Activity: Disease Prevention Scavenger Hunt

- Students investigate their households to determine what items contribute to the spread of disease and what items help prevent disease.

	• Students identify household items that are necessary in schools and homes to prevent spread of disease. • Students identify businesses and organizations within their community that support disease prevention.
6 - 12	**Activity: The Great CDC Scavenger Hunt (Centers for Disease Control)** • Students are given ten communicable disease items to look for on the Centers for Disease Control and Prevention website: www.cdc.gov. • Here are the ten items: 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? **Activity: Who Gets the Drug? (individual or small group)** • 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 will 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 rationale of choices:

1. Teachers and other school employees
2. Students between ages 5-18
3. Health care workers in hospitals or clinics
4. State government employees
5. Young children between birth and 5
6. Parents of young children birth to 5
7. Public servants like police and fire
8. Food industry employees
9. President and the Oval Office
10. Center for Disease Control researchers
11. Farm workers
12. Celebrities and Athletes
13. All religious leaders in the country
14. All adults between 20 and 40, determined to be the highest risk for severe symptoms
15. 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.

Activity: Eliminating the Super Bug (individual or small group)

- This activity examines key questions surrounding the Coronavirus communicable disease and issues surrounding prevention of the spread of this disease.
- Read and provide the following scenario for students…

  A current problem in our world is a spread of a new virus known as the Coronvirus which causes the illness corvid-19. This virus can cause pneumonia. Those who have fallen ill are reported to suffer coughs, fever and breathing difficulties. In severe cases there can be organ failure. As this is viral pneumonia, antibiotics are of no use. Recovery depends on the strength of the immune system. Many of those who have died from this virus were already in poor health. The coronavirus is a communicable disease that can be spread from one person to another.
- Follow these steps to complete this activity…

There has been an outbreak of coronavirus in Jacksontown. It is estimated that 200 people have gone to the health clinic, their doctor, or the hospital for what appeared to be the flu but found after testing they had the presence of this drug-resistant virus. You are the public health leader for this community. It is your task to come up with actions that need to be taken to prevent further spread of this virus. You have the following questions to answer and are allowed to use the internet to help you in your deliberations.

1. How do most people catch this virus? (three ways)
2. Why is coronavirus a dangerous virus?
3. What are the differences between a virus and a bacteria in terms of remaining alive?
4. What are five ways a person can catch the coronavirus?
5. If we developed an advertising campaign to prevent the spread of this virus what should be in it? (three ideas)
6. Of the above answers, which one is the most important to our plan to prevent the spread of the coronavirus

Instructions: explore websites that address Covid-19 (Coronavirus) and the problems it causes. www.cdc.gov

Sample Response:

1. How do most people catch this virus? (three ways)
   Carried by the skin. Important because wrestlers can transmit the infection by skin to skin contact.
   Contaminated surfaces.
   Airborne particles – Covid-19 (coronavirus) can spread from the nose whether the person appears sick or not.
2. Why is coronavirus a dangerous virus?
   Spreads easily
   Antibiotics cannot cure
   Attacks the immune system
3. What are the differences between a virus and a bacteria in terms of remaining alive?
   Viruses need to infect something to keep living, bacteria can exist on their own for months.
4. What are five ways a person can catch the coronavirus?
   Failure to wash hands regularly
   Public environments
   Sharing food
   Coughing / sneezing around others
   Common surface items (door handles, tables, etc.)
5. If we developed an advertising campaign to prevent the spread of this virus what should be in it? (three ideas)

Lifestyle choices can also increase MRSA chances.
Stay at home, hands clean, and prevent airborne particles.
We have the cleanest building in town (local hospital).

6. Of the above answers, which one is the most important to our plan to prevent the spread of the coronavirus
Personal choices

Resources	Check for Understanding
• Handwashing: Clean hands saves lives: https://www.cdc.gov/handwashing/index.html • Good health habits fact sheet: http://www.cdc.gov/flu/protect/habits.htm • Specific to H1N1 flu: http://www.cdc.gov/h1n1flu/ • Handwashing vs. sanitizers: http://www.cdc.gov/ncidod/EID/vol12no01/05-1371_app2.htm • Info for children: http://www.cdc.gov/germstopper/home_work_school.htm • Posters that give good info: http://www.cdc.gov/germstopper/materials/HealthyHabits_HR.pdf • Swine flu and you - includes hand washing technique and how to use alcohol-based gels: http://www.cdc.gov/h1n1flu/swineflu_you.htm • Misconceptions about the flu vaccines and "stomach flu": http://www.cdc.gov/flu/about/qa/misconceptions.htm • Types of influenza viruses. Includes how the flu virus can change and how it can be transmitted from animals to people: http://www.cdc.gov/flu/about/viruses/index.htm • This is like Snopes - finding out if information is correct or not - sanitizers can be dangerous to young children (and others) if they ingest it: http://www.hoaxslayer.com/hand-sanitizer-warning.shtml • University of Illinois flyer on hand washing and sanitizers with warning for adults to keep out of reach of small children: http://wellnessways.aces.illinois.edu/pdf/Hand%20Washing-How%20To%20Handout.pdf • World Health Organization (WHO) update on disease outbreaks: http://www.who.int/csr/outbreaknetwork/en/ • USA Today's Interactive Map about the swine flu outbreak around the world, what's being done, where are the outbreaks, etc.: http://www.usatoday.com/news/health/2009-04-27-swine-flu-world-map_N.htm	• How effectively can students evaluate information about contamination? • How correctly can students understand sites that can easily be contaminated? • How well can students identify safe behaviors that will prevent them from being contaminated? • How well can students demonstrate and understanding of effective hygiene habits? • How well can students identify valid sources of communicable disease prevention?