PLTW Virtual Learning

Medical Detectives

Lesson 14

April 23, 2020

7 & 8 Grade Medical Detectives
Lesson: April 23, 2020

Objective/Learning Target:
Lesson 14, Part 9

Students will be able to learn and understand more about the Coronavirus (Covid-19) infectious virus.

Disclaimer: This lesson is optional for anyone who is uncomfortable with this topic.

Warm-Ups:

Refer back to the previous lesson and think about the 10 infectious diseases that were listed. What was the information you found out about the 5 diseases you researched?

1. **Were they more infectious or contagious?**
2. **Were they spread by humans or by other factors?**
3. **How could they be prevented?**

****Lesson Disclaimer: The following information is about the Coronavirus (Covid-19). If you find this upsetting or uncomfortable, in any way, please do not proceed with this lesson. All information was taken from posted Youtube videos and the CDC, Center for Disease Control and Prevention, government website. Thank you.**

Lesson Introduction/Background Information:

**Let's take a look at What You Need to Know About Infectious Diseases to sum up the information we have been learning about bacteria, viruses, infectious and contagious diseases.

**Remember that bacteria are living organisms that can live on their own; however, viruses are dependent on a host and cannot live independently. They will die without one.

What was your take away from the video?

Practice:

To move further in our investigation of infectious diseases, we are going to focus on the Coronavirus (Covid-19) and learn as much as we can about this viral infectious disease.

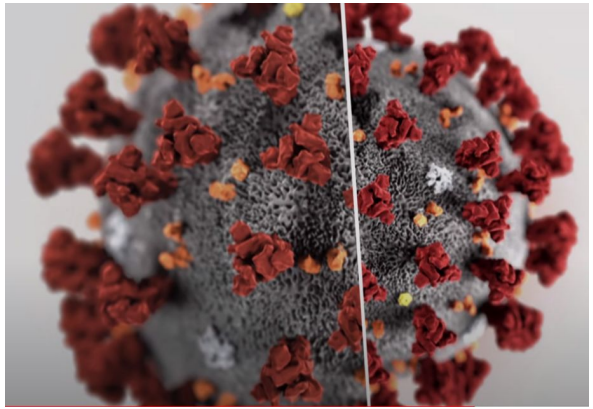
What do we know?

1. **It has become a pandemic and what does this mean?**
2. **Is it infectious? Or contagious?**
3. **How can it be spread?**
4. **What can you do to help prevent the disease?**
5. **Why isn't there a vaccine for this disease?**

Practice:

Get the Facts on Coronavirus Video. After watching the video answer some of the questions from the information you've learned.

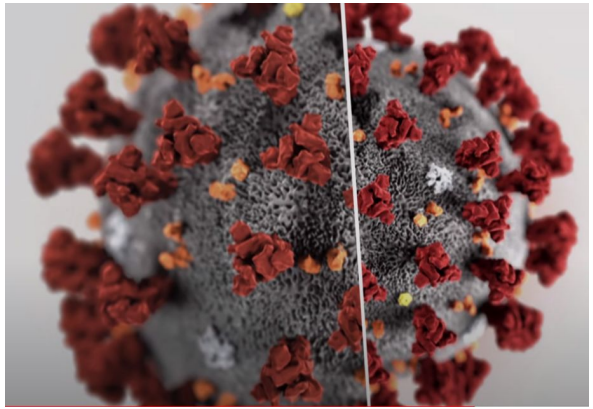
1. What is the target for the Coronavirus spikes?
2. What happens when they attach?
3. Why is it so important not to touch your face?
4. If you've been exposed, how long should you quarantine yourself and why is this important?
5. Why does our immune system not have any antibodies?



Self Assessment:

Please go to the website link for the CDC Centers for Disease Control and Prevention - Coronavirus (Covid-19) reading over each of the following sections located at the top of the page. While reading the information, write 2 things you didn't know or that you find interesting about this virus.

1. How to Protect Yourself
2. What to Do if You are Sick
3. Symptoms



Extend Your Learning/Continued Practice:

Please go to the CDC Centers for Disease Control, website link for People Who Need to Take Extra Precautions, reading over the information about people who are at a higher risk for getting the illness. While reading the information, write down 4 ways people can be at a higher risk.

Why is it important to take precautions to protect those who are at a higher risk for getting the virus?

Answer Key:

Practice Page 1

1. It's in multiple countries across the world
2. Contagious, it's a virus
3. Sneezing, coughing, talking from person to person, touching your face with the virus on hands.
4. Keep your face covered when in public areas, stay home if you are sick or could be contagious, wash your hands often for at least 20 seconds, sanitize areas, quarantine for 14 days if exposed, always cover your cough/sneeze.

Practice Page 2

1. The spikes allow it to attach to your lungs
2. When the virus spikes attach to your lungs, they begin reproducing and killing the lung's cells, causing shortness of breath and making it hard to breath.
3. The virus enters through your eyes, nose and mouth.
4. 14 days, You are now contagious and can easily spread the virus to others. If it can't transfer to another host it can't spread and it isolates the illness.
5. This is a new virus and our bodies have never been exposed to it so our bodies have not had a chance to build antibodies against the virus. If our bodies did have antibodies, they could grab onto the virus spikes and get rid of them.