We are Wonderfully Made

I will praise thee: for I am fearfully and wonderfully made: marvelous are they works; and that my soul knoweth right well.

Psalms 139:14
What Is A Virus?

- A microscopic organism that invades living cells in order to reproduce
- After contacting a host cell, a virus will insert genetic material into the host and take over that host’s function
- They can invade plants, animals and humans
- Many viruses have no cure
- Not all viruses are bad
Organisms on the Edge
Are they dead or alive?

- When not in a cell a virus is called a virion which is like a lifeless rock
- They are not part of any life kingdom
- Made of genetic material DNA or RNA
- Surrounded by a protective coat of protein and fat
- They cannot reproduce by themselves
- They do not produce waste
What Are Different Morphological Shapes?

- Filamentous (Helical)
- Isometric (Icosahedral)
- Enveloped
- Head and Tail
What Is A Prion?
(Proteinaceous infectious particle)

- Proteins That Fold Back on Themselves
- Leads to Brain Damage (Mad Cow)
- Is Not a Virus
Childhood Viruses

Chicken Pox

Measles
Two Types of Viruses

- **Dengue**
  - Leading cause of death in the tropics
  - 400 Million people infected yearly
  - Transmitted by mosquitoes

- **Herpes** (The most common is genital herpes)
  - Spread by sexual contact
  - Chronic: can last a lifetime
  - Pain, itching, sores and ulcerations
How Do Viruses Reproduce?
How do Vaccines Work?

- A vaccine works by training the immune system to recognize and combat pathogens.
- Live, Inactivated
The Fight
THE “RONA”
What Is It?

- The World Health Organization (WHO) defines coronaviruses as a large family of viruses that cause illness ranging from the common cold to more severe diseases. The name comes from the Latin word "corona", which means "crown" or "halo", and refers to the shape of the virus particle when viewed under a microscope.
Where Did The Virus Come From?

- Novel viruses come from animals ... the WHO tracks novel viruses in animals, (sometimes for years watching for mutations). Usually these viruses only transfer from animal to animal (pigs in the case of H1N1) (birds in the case of the Spanish flu). But once, one of these animal viruses mutates and starts to transfer from animals to humans ... then it’s a problem.
Why Is It So Contagious?

- Because we have no natural or acquired immunity... the RNA sequencing of the genes inside the virus isn’t human, and the human immune system doesn’t recognize it so, if our immune system is weak, we cannot fight it off.
How Does The Virus Spread?

- The disease can spread from person to person through small droplets from the nose or mouth which are spread when a person with COVID-19 coughs or exhales. These droplets land on objects and surfaces around the person. Other people then catch COVID-19 by touching these objects or surfaces, then touching their eyes, nose or mouth.

- People can also catch COVID-19 if they breathe in droplets from a person with COVID-19 who coughs out or exhales droplets. This is why it is important to stay more than 2 meter (6 feet) away from a person who is sick.
How Do You Know If You Have The Flu Or A Cold

<table>
<thead>
<tr>
<th>Signs and Symptoms</th>
<th>Cold</th>
<th>Flu</th>
</tr>
</thead>
<tbody>
<tr>
<td>Symptom onset</td>
<td>Gradual</td>
<td>Abrupt</td>
</tr>
<tr>
<td>Fever</td>
<td>Rare</td>
<td>Usual</td>
</tr>
<tr>
<td>Aches</td>
<td>Slight</td>
<td>Usual</td>
</tr>
<tr>
<td>Chills</td>
<td>Uncommon</td>
<td>Fairly Common</td>
</tr>
<tr>
<td>Fatigue, Weakness</td>
<td>Sometimes</td>
<td>Usual</td>
</tr>
<tr>
<td>Sneezing</td>
<td>Common</td>
<td>Sometimes</td>
</tr>
<tr>
<td>Chest Discomfort, Cough</td>
<td>Mild to Moderate</td>
<td>Common</td>
</tr>
<tr>
<td>Stuffy Nose</td>
<td>Common</td>
<td>Sometimes</td>
</tr>
<tr>
<td>Sore Throat</td>
<td>Common</td>
<td>Sometimes</td>
</tr>
<tr>
<td>Headache</td>
<td>Rare</td>
<td>Common</td>
</tr>
</tbody>
</table>
How to Prevent Spreading

- Social Distancing
How to Prevent Spreading

- Wash Your Hands
How To Prevent Spreading

- Eat Healthy to Stay Healthy
How To Prevent Spreading

- Only go to the store for essentials
How to Prevent Spreading
Everyone Up Where You Are and Let’s Exercise!

- Exercise to Stay Healthy
How to Make Disinfectant from Povidone Iodine

- Povidone Iodine : 10 to 1 (1/2 cup Iodine to 5 cups of distilled water)
How to Make Hand Sanitizer From Aloe Vera Plant
How To Prevent Spreading

- Wear a Mask
Use ‘BLUE’ Shop Paper Towels to Make This Mask More Effective
More Masks
Cloth Masks

No-Sew
BANDANA FACE MASKS
Make A Mask

Assignment: Make a mask that covers your nose, and mouth. Take a selfie and send it to:
Praise God
Discussion

- What are your questions about this pandemic?
- Any fears?
- What questions do you have?
- What are ways Pathfinders can help during this time?
- Any comments you would like to make?