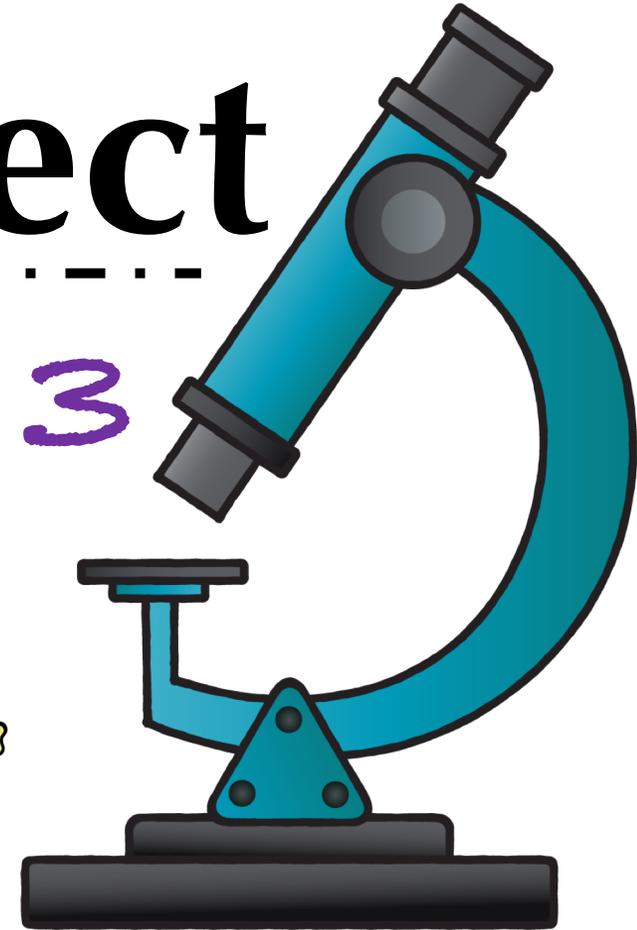
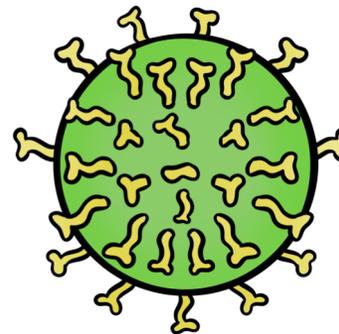
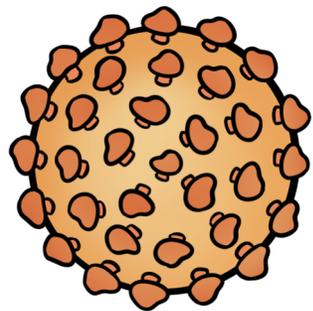


The Virus Project

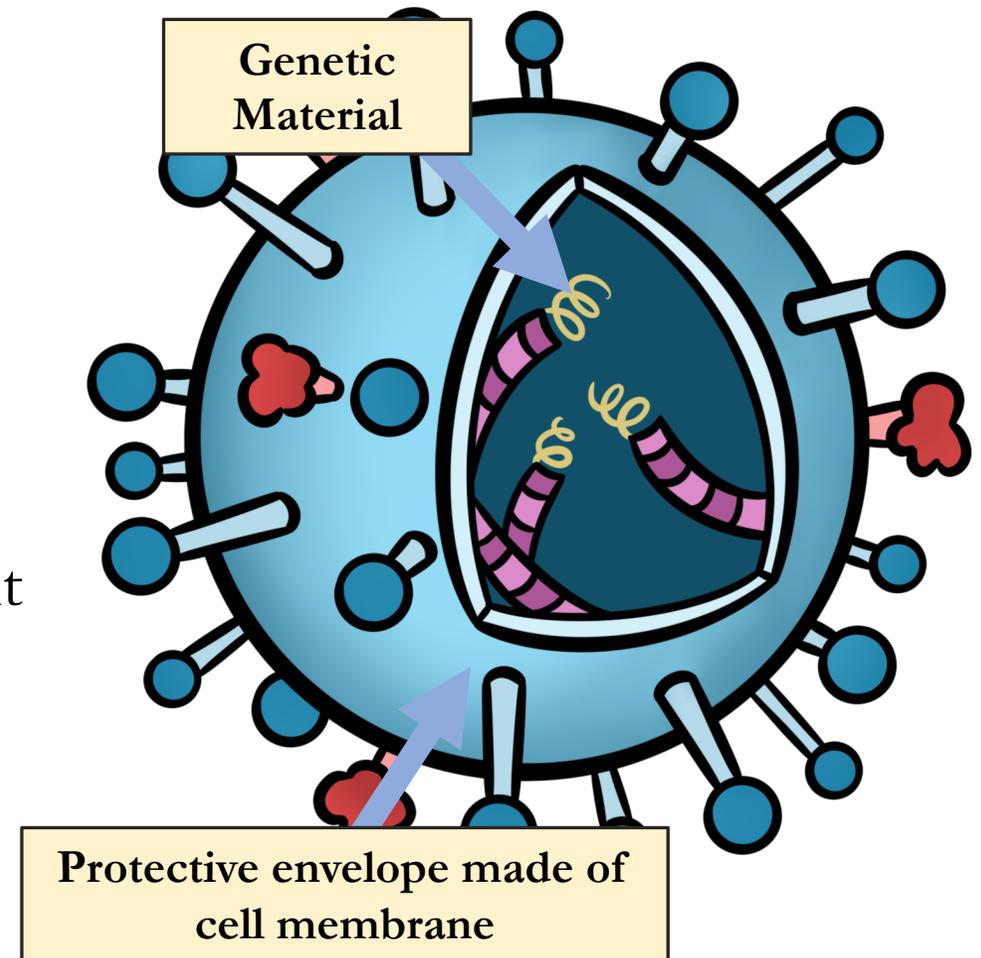
Mystery Virus 3



Note: This mystery virus is based upon a real-life virus.

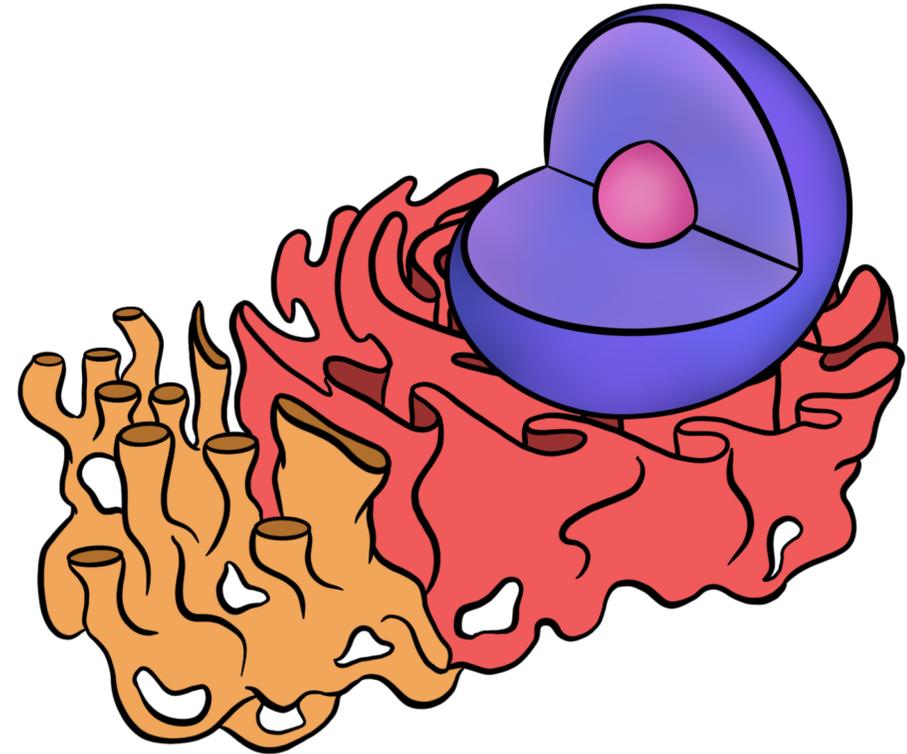
Research Card #1 *Mystery Virus 3*

- This mystery virus contains several strands of RNA as its genetic material.
- This virus is an “enveloped” virus, meaning it has a lipid bilayer around it.
- The “spikes” on the outside of the virus help it “find” and attach to a host cell.
- After binding, or “connecting,” to a host cell, the virus is endocytosed.



Research Card #2 *Mystery Virus 3*

- Once inside of the cell, more copies of the RNA is made, with the assistance of viral proteins.
- Then the virus, co-opts the cell's machinery for the process of translation and the “parts” for new viral particles are made.
- Once the new viral particles are assembled, they “bud” from the infected cell, taking with them a portion of the cellular membrane to serve as their envelope.

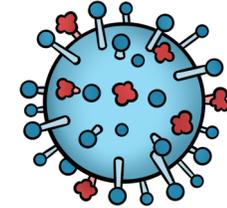
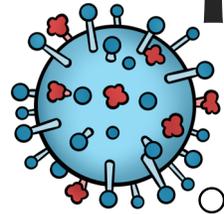


Research Card #3 *Mystery Virus 3*

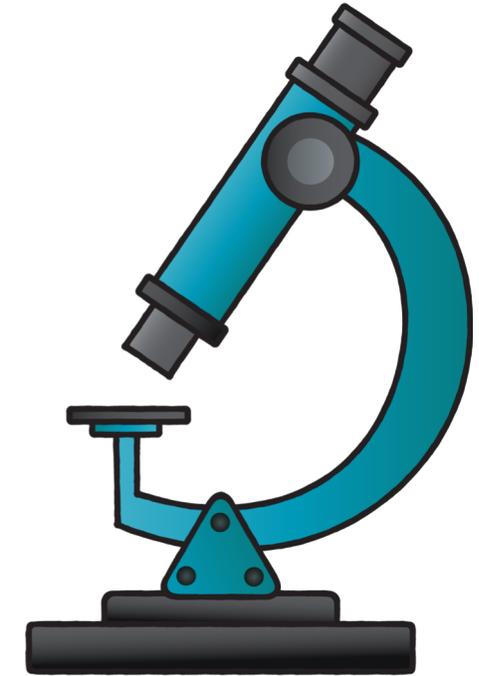
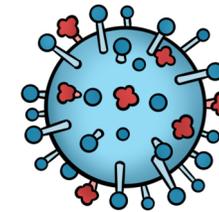
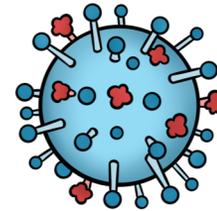
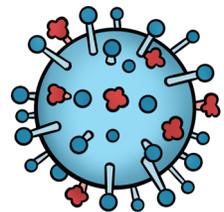
- The virus tends to infect cells in the respiratory system. Viral infections that are concentrated in the nose and throat are less lethal than the ones where the virus replicates deep in the lungs.
- Symptoms range from mild to severe (it can cause fatal complications). The most common symptoms are a high fever, sore throat, cough, pain in muscles/joints, headaches and fatigue (extreme tiredness). Children may also experience diarrhea and vomiting.
- Viral particles are spread during coughs and sneezes. They can also be spread through contaminated surfaces; individuals can unknowingly infect themselves after touching a contaminated surface, then rubbing their eyes or touching their nose/mouth.



Research Card #4 *Mystery Virus 3*



- At this time, there are no known mutations that confer immunity in the human population to this particular virus. Individuals may get this virus multiple times during their lifetime.
- The human immune response appears to be able to fight well enough to prevent severe infection in most cases, but the virus is capable of causing death. Those most at risk are children, the elderly and persons with underlying health issues.
- There are new “versions” of this virus each year as a result of quick viral evolution, making annual vaccination an important part of containing outbreaks. This virus has caused pandemics in the past. Research on this virus continues...



Viruses are so small that they must be viewed using an electron microscope. Many experiments are carried out with cells purposely infected to better understand the biology of the virus and how antivirals might work.