Student Activity Sheet

Student Name_________________________

1. In your own words, explain why a virus is considered non-living.

2. Are there similarities between viruses and living organisms? If so, what are they?

3. Using the Interactive Simulation Key, explain the differences between a susceptible person, sick person, and recovered person.

4. Using the Interactive Simulation Key, define the following terms:
   - Initial Population:
   - Sick Rate:
   - Recovery Rate:
   - Days to Recovery:
   - Susceptibility Rate:
   - Days to Susceptibility:

5. After working with the virus simulation, explain what is occurring when a sick person is exposed to a population.

6. Relate this simulation to the COVID-19 pandemic. Explain how this simulation can help show the effects of quarantining to prevent the spread of the virus.
7. After using the virus simulation, can someone become reinfected with a virus? If so, why?

For the following questions, set the population to 100 and run the simulation for 50 days.

8. Think about a sickness like Norovirus (stomach virus) that is very contagious, but easily recovered from.
   a. What would you set the parameters to in this simulation to model this illness?
   b. Before you run the model, record your prediction of what will happen to the population.
   c. Test your prediction using the simulation. Record your results. Were the results what you expected? Explain.

8. Now think about an illness that does not have a cure such as Human Immunodeficiency Virus (HIV) and model this disease in the simulation.
   a. What would you set the parameters to in this simulation to model this illness?
   b. Before you run the model, record your prediction of what will happen to the population.
   c. Test your prediction using the simulation. Record your results. Were the results what you expected? Explain.