

## Class #1: Virus Life Cycle and Families

October 4, 2020

1. Can viruses survive without cells? Explain.
  
2. Name four properties that describe living organisms.
  
3. Name the five most important steps in a virus' life cycle starting from attachment to egress.
  
4. Do all viruses follow the same life cycle?
  
5. Define the ff terms as discussed in class:
  - a. Susceptible cells:
  - b. Permissive cells:
  - c. Resistant cells:
  
6. In the context of SARS-CoV-2, name one cell in your body that is both susceptible and permissive to CoV-2 infection.
  
7. What is the viral receptor that SARS-CoV-2 uses? What is the host (cell) receptor to which this viral receptor attaches?

8. Do you think if a non-susceptible cell is engineered to express ACE2 or TMPRSS, will SARS-CoV-2 infect that newly engineered cell?
  
  
  
  
  
  
  
  
  
  
  
  
9. How do we grow viruses in the lab? Do you think we can/should grow the viruses in animal models (ie. Mice, rats, hamsters)?