**Student Handout**

1. **Answer the following:**

**e. Draw what comes to mind when you think of a virus**

* 1. Do you know what viruses are?
  2. Have you ever been affected by a virus?
  3. How did you feel?

* 1. Do you think viruses are bad or good?

1. **After receiving your assigned virus**
   1. Answer the following:
      1. What type of virus do you have?

* + 1. Is the virus pathogenic (dangerous)?
    2. How does the virus attach to host cells?
    3. Is there a specific host or cell that your virus attaches to?
  1. List of materials
  2. Planning: Make a sketch of your “wild type” virus, your modified virus and the two cell membranes. How are you planning on making the virus attach to one cell and not the other?



1. **Reflection: Answer the following after completing the project. You will use this information during the presentation of the project.**
   1. What kind of virus you are showcasing? What is the virus morphology (parts of the virus)?
   2. Is the virus pathogenic? How do they infect cells, which cells do they usually infect (organ, humans, animals, etc.)?
   3. How did you make your unmodified “wild type” virus attach to both types of cell surfaces you created?

* 1. How is your modified version of the virus able to attach to one cell and not the other?