Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Virus Explorer: hhmi BioInteractive**

Go to the following web address on Chrome: <https://www.biointeractive.org/classroom-resources/virus-explorer>

Click on Launch Interactive.

PROCEDURE: Follow the instructions as you proceed through the activity, and answer the questions in the spaces provided.

1. Open the Virus Explorer activity and click on the “About” tab at the bottom. Use the information in this tab to answer the following questions.

a. List four ways in which viruses can differ from each other.

b. In the table below, describe what each abbreviation in this activity means.

|  |  |
| --- | --- |
| Abbreviation | Description |
| nm |  |
| bp |  |
| ss |  |
| ds |  |

2. Close the “About” tab and return to the main page. Find the “i” icon next to each viral characteristic across the top. Click on each icon to learn more about that characteristic, then answer the associated question below.

a. Envelope: The envelope is an outer layer that some, but not all, viruses have. How does an envelope form?

Also, which 6 of the 10 viruses are enveloped?

b. Host(s): From the virus’s perspective, why is the host important?

c. Genome Type: What are four characteristics of viral genomes that may vary among viruses?

d. Transmission: Define the terms “vector” and “zoonotic.”

Vector:

Zoonotic:

e. Vaccine Availability: What is one advantage of being vaccinated against a particular virus?

3. Click the viral characteristics across the top of the main page to classify and learn more about the viruses. Use what you learn to answer the following questions.

a. What is one difference between the rabies virus and the influenza A virus?

b. Of the 10 viruses shown, which is the only one that infects plants?

c. As of 2020, a new coronavirus called SARS-CoV-2 has been in the news. There have been many efforts to develop a vaccine for this coronavirus. Why is this virus of particular concern?

d. Which two viruses infect all the vertebrates (fish, amphibians, reptiles, birds, and mammals) included in the activity?

e. Of the 10 viruses shown, which is the only one that infects bacteria?