# **Explore: Vir**us Interactive

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## HHMI Biointeractive: Virus Explorer

**Directions**: Open the following link above: Click on each of the characteristics of the virus and determine which of the viruses have which characteristics. Fill in the table accordingly.

Virus Type	Envelope	Structure	Host	Genome Type	Transmission	Vaccine
Influenza A						
ні						
TMV						
т7						
Coronavirus						

## Part 2: Virtual Lab Simulation

#### **Platform Selection:**

• Use the online simulation provided at Straight from a <u>Scientist - Virus Replication Simulation</u>.

### Simulation Tasks:

- 1. Comparing Cycles:
  - Explore the lytic and lysogenic cycle simulations. Write down what happens in each cycle.
  - Write down how the lytic and lysogenic cycles are similar and different.

	Lytic Cycle	Lysogenic Cycle
2. Predicting Outcor	T I I I I I I I I I I I I I I I I I I I	

• Think about what might happen during a viral infection in both cycles.

• Consider how cells might survive, how the virus might make more copies of itself, and how the host might be affected.

#### 3. Reflective Questions:

- Use the following sentence frames to help write your answers:
  - What are the main structural components of a virus?
    - The main parts of a virus are \_\_\_\_\_.

- How does the lytic cycle differ from the lysogenic cycle?
  - The lytic cycle is different from the lysogenic cycle because \_\_\_\_\_.

- What can cause a lysogenic virus to enter the lytic cycle?
  - A lysogenic virus might enter the lytic cycle if \_\_\_\_\_.

- What might be the consequences for a cell infected by a lysogenic virus?
  - If a cell is infected by a lysogenic virus, it might \_\_\_\_\_.



**Part 3: Discussion Post** 

Summary Posting: In your LMS (Canvas, google classroom...)

- Write a summary (150-200 words) of what you learned from the simulation. Talk about the structure of viruses and how the lytic and lysogenic cycles work.
- Use the following sentence frames to help write your summary:
  - In the simulation, I learned that viruses have \_\_\_\_\_ and \_\_\_\_\_ as their main structural components. The lytic cycle is \_\_\_\_\_, while the lysogenic cycle is \_\_\_\_\_. One thing that surprised me was \_\_\_\_\_.

Brainstorming - Record your actual reflection in the discussion post provided by your instructor...