

## Unit 2: Lesson 2 – Case Studies: Influenza and HIV

### Activity 2: Causes and Consequences of an Influenza Pandemic

**Part 1:** Watch the influenza segment from the documentary *HILLEMAN* and answer the following questions.

1. What example was used in the segment to illustrate how deadly the 1918 influenza pandemic was?
2. Why do many people get infected with influenza every year?
3. What makes antigenic shift in influenza virus so potentially deadly?
4. The 1957 flu was an example of antigenic shift from a combination of two different influenza strains that usually infect which animals?
5. How was Dr. Hilleman able to predict the influenza pandemic of 1957?
6. How might the return to school from summer break have impacted the 1957 Influenza pandemic in America if a vaccine had not already been prepared?

**Activity 2: Causes and Consequences of an Influenza Pandemic**

**Part 2:** Use resources about influenza and influenza pandemics provided by your teacher to answer the following questions.

1. What is the significance of the letters and numbers in flu strains identified by the letters H and N?
2. What protein is the “key” to accessing and infecting a cell?
3. What protein enables the flu virus to get out of a cell in order to infect other cells?
4. What kind of influenza virus caused the 1918 pandemic?
5. How many times has an influenza pandemic occurred since the year 1900, and in what years?
6. How does pandemic influenza differ from seasonal influenza?
7. Why have bird flu viruses needed to combine with a different type of influenza to cause pandemics in humans?
8. Why don't we name influenza pandemics after geographical places anymore?