



Flu Transmission



Lesson 1: How Does Influenza Spread Through a School?

Influenza is a virus that causes the common illness called the flu. The flu is responsible for thousands of deaths each year. How does this disease spread through a student population?

Doing the Science

1. Start the Flu Transmission Simulation.
2. Select the “None” button under the Factor menu on the left-bottom of the screen.
3. Select the “Run” button at the bottom center of the screen.
4. Note the Progress bar, which shows time running for a six-week period.
5. Select the “1” icon on the Progress bar.
6. Count and record in Table 1 below the number of infected students at the end of the first week of the flu outbreak.

Table 1. Flu Infections

Week	Infected	Uninfected	Week	Infected	Uninfected
1			4		
2			5		
3			6		

7. Select the “2” icon on the Progress bar.
8. Count and record in Table 1 the number of infected students at the end of the second week of the flu outbreak.
9. Repeat this process until you have counted and recorded data for all six weeks.

What Do You Understand?

1. As time progressed, how did the number of students who were infected by the flu change?

2. Provide a possible reason for your answer to the previous question.

3. Discuss implications of the way that diseases spread if the infection was of a more severe nature (like smallpox) that is 95% lethal.

4. The sequence 1, 2, 3, 4, 5, 6... is an arithmetic progression. The sequence 1, 2, 4, 8, 16... is an exponential progression. Is the spread of disease more like an arithmetic or exponential progression? Support your answer with a reason.

5. Describe how you think flu is spread from one student to another student in a school.

6. Influenza is caused by a virus. Compare and contrast a virus and a bacterium.
