



Flu Transmission

STEM Sims

Lesson 4: How Does the Use of Antibiotics Affect the Spread of Influenza Through a School?

Antibiotics have been shown to be highly effective in reducing the severity and spread of infections caused by bacteria. Can the application of antibiotics to students reduce the number of infections due to influenza?

Doing the Science

- 1. Start the Flu Transmission Simulation.
- 2. Select the “Antibiotics” 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. Compared to your results from Lesson 1, how did the use of antibiotics affect the spread of influenza in the school?

3. What does the prefix "bio" mean?

4. What does the prefix "anti" mean?

5. Some countries do *not* require a prescription for antibiotics. Do you think this a good idea? Support your response with a reason.
