Name_____ Period _____ Date _____

Flu Transmission

STEM Sims

Lesson 3: How Does the Use of Sanitizer Stations Affect the Spread of Influenza Through a School?

Some schools have placed hand-sanitizing stations throughout the school to impact the spread of certain illnesses, such as influenza. Can the use of sanitizer stations by students reduce the number of infections due to influenza?

Doing the Science

1. Start the Flu Transmission Simulation.
2. Select the "Sanitizer Station" 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?

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2. Compared to your results from Lesson 1, how did the use of sanitizer stations affect the spread of influenza in the school?

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3. What is the main ingredient in most hand sanitizers?

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4. Some people are concerned about the repeated use of hand sanitizer because of its ability to kill almost all bacteria located on a person's hands. Propose a reason why this total killing of bacteria concerns some people.

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5. Other people have concerns with hand sanitizer use because its main ingredient could cause smaller children to become drunk if the children ingest the sanitizer. Does this concern seem valid? Support your response with a reason.

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