

Bacteria

STEM Sims

Lesson 1: How Clean is the Kitchen?

Would you eat off the kitchen floor? How about the counter or sink area? Bacteria can colonize in many areas in a home. Can you determine if harmful bacteria are present in this kitchen?

Doing the Science

1. Start the Bacteria Simulation by clicking on the “Sim” tab.
2. Move the mouse to the counter near the flower.
3. When the word “Counter” appears, click the mouse. The button in the “Sample Collected” area should turn red.
4. Move the mouse to the microscope and click on the scope.
5. View the sample by clicking on “Single,” “Multiple,” “Flagellated,” and “With Gram Stain.”
6. Sketch what you see in the microscope in the appropriate space in Table 1 below.
7. Select the “Back” button at the bottom right of the screen.
8. Click on the red “Clear” button in the “Sample Collected” area.
9. Move the mouse to the kitchen sink area.
10. When the words “Kitchen Sink” appear, click the mouse. The button in the “Sample Collected” area should turn red.
11. Repeat steps 4 – 6.
12. Use the “Bacteria Database” in the Background section of the site to identify the bacteria type (if present) in the counter and kitchen sink area.

Table 1.

Sample	Single	Multiple	Flagellated	Gram Stain	Bacteria Type
Counter					
Kitchen Sink					

Do You Understand?

1. What is the most likely cause of bacteria that was present on the counter?

2. What is the most likely cause of bacteria that was present on the kitchen sink?