Name_____ Period _____ Date _____

Funky Food   STEM Sims

Lesson 1: Population Size
When there is a food contamination outbreak, the main goal is to find the source of the outbreak so that people can protect themselves from the outbreak and avoid getting sick. Data has to be collected in order to know where the source came from. The more information analysts can get, the more accurate the conclusions will be because the information will better represent the population. What will the results be if only a small population is tested? Put on some gloves to investigate this sickly situation.

Doing the Science
1.   Start the Funky Food Simulation by clicking on the "Sim" tab.
2.   Read the instructions provided on the screen.
3.   Click on any orange dot, which represents a household.
4.   The household will display what restaurant they ate at and whether or not they got infected. According to the information provided, click on the restaurant name under the "Infected" or "Not Infected" boxes to add the household into the count.
5.   If you make a mistake, click on the Undo button (the curved arrow).
6.   Repeat steps 3 - 4 nine additional times so that you have a total population of 10.
7.   Click on the "Analyze" button.
8.   Beside "Hypothesis: Exposure to" use the drop down menu to hypothesize the cause of the infection by clicking on the restaurant name.
9.   Using your hypothesis, fill out the table. If you need help, click on the question marks beside the text boxes.
10.   You can always return to the previous screen using the "Back" button to look at the counts for the homes that were infected and those that weren't. Click on "Analyze" to return to the hypothesis screen and continue filling out the table.
11.   Click on "Calculate R.I." to find the relative risk of infection.
12.   Click on "Help with R.I." to view the equations of how the Relative R.I. is calculated.
13.   Click on "Interpret R.I." to analyze the results of the R.I calculated.
14.   Record the relative risk of infection into Table 1 below.
15.   Repeat steps 3 - 11, increasing the total population to 20, 30, 40, and 50 households.

Table 1.

	10 Households	20 Households	30 Households	40 Households	50 Households
Relative Risk of Infection					

Do You Understand?
1.   What happened to the relative risk of infection as the number of households increased? Did you expect this to happen?