Name	Period	Date	
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STEM Sims

Lesson 1: Distributing Emergency Supplies

In anticipation of an emergency situation, emergency supplies of food, water, and fuel are distributed to supply stations. In the event of an emergency, access to the supply stations is extremely important. What is the most effective distribution of emergency supplies, so that should an emergency arise, supplies can be easily accessed?

Doing the Science

- 1. Start the Supply Line Simulation by clicking on the "Sim" tab.
- 2. Set the number of runs to 3. (You may set the number of units per supply icon to whatever value you wish; just be sure to keep that value the same for the entire lesson.)
- 3. Distribute the supplies from the Supply Depot to the Supply Stations any way you wish, being sure to distribute all of the supplies. Record how many units of food, water, and fuel you place in each Supply Station in Table 1 below, in the columns labeled Trial #1.
- 4. Click the "Run" button.
- 5. When the run is completed, a Results box will appear. Record the data about how many trucks were supplied into Table 1 below, in the column labeled Run #1.
- 6. Click the "Run" button to begin Run #2. Record your results in Table 1 below (column Run #2).
- 7. Click the "Run" button to begin Run #3. Record your results in Table 1 below (column Run #3).
- 8. Click the "Reset" button.
- 9. Repeat steps 2 6, but distribute the supplies differently than you did in Trial #1. Record how many units of food, water, and fuel you place in each Supply Station in Table 1 below (columns Trial #2).
- 10. Click on the "Reset" button.
- 11. Repeat steps 2 6, but distribute the supplies differently than you did in Trial #1 and Trial #2. Record how many units of food, water, and fuel you place in each Supply Station in Table 1 below, in the columns labeled Trial #3.

Table 1.

	Trial #1			Trial #2			Trial #3		
	Food	Water	Fuel	Food	Water	Fuel	Food	Water	Fuel
Yellow Supply Station									
Red Supply Station									
Blue Supply Station									
Green Supply Station									
White Supply Station									

Table 1. (continued)

	Run #1	Run #2	Run #3	Run #1	Run #2	Run #3	Run #1	Run #2	Run #3
Trucks Supplied									
Total Trucks Supplied									

Do You Understand?

1. What was the most effective method of distributing supplies? Explain your answer.