Name_____ Period _____ Date _____

Bridge Out

STEM Sims

Lesson 2: Street View

In this simulation, you will be mapping out paths to different orange points. The goal is to try to map out a route so that you can start any of the points and get to every other point. Can you direct the streets so that you can visit all the points?

Doing the Science

1. Start the Bridge Out Simulation by clicking on the "Sim" tab.
2. Click on "Streets". Read the instructions provided to familiarize yourself with the task.
3. Click on each of the streets to place an arrow. Click on the arrow if you want to change its direction. Remember the goal is to map out a route so that you can start at any of the points and reach all of the other points.
4. Click on "Yes" to test the map.
5. Click on an orange point to see the path that the arrows can make.
6. Continue clicking on the orange point until there are no more path numbers.
7. Repeat steps 5 - 6 for the other orange points.
8. If not all of the points can be reached, click on "Yes" and change different arrow directions to try to find paths that reach all of the points.
9. Repeat steps 4 - 7 to test your path.
10. Keep testing different paths. When finished testing, draw the path configuration into Table 1.
11. Click on "No" and answer the question. Read the explanation to understand the solution.
12. Click on "New" and answer the second question. Read the explanation to understand the solution.
13. Click on "New" for a new map and repeat steps 3 - 12 for each map.
14. After completing the three practice maps, you can click "New" to repeat the practice maps or you can click on "Quiz".
15. Repeat steps 3 - 12 for the quiz map.

Table 1.

Practice Map 1	Practice Map 2	Practice Map 3	Practice Map 4	Quiz

Do You Understand?

1. Was it harder to find a circular route with these streets than the bridges? Why?

2. What would happen if there were two bridges instead of one between each of the orange points?

3. What happens if you reverse all of the arrows of a path where you could start at any point and reach every other point?

4. Would there be a simple way to do this simulation through pencil and paper?