Name_____ Period _____ Date _____

Fueling Station

STEM Sims

Lesson 1: Location, Location, Location

Business franchise planners must take many factors into account when deciding on where to locate a new store. The decision-makers want to provide more service to their existing and future customers without taking business away from their current stores. Can you help the planners decide where to place their newest fueling station?

Doing the Science

1. Start the Fueling Station Simulation by clicking on the "Sim" tab.
2. Note and record in Table 1 the letter and location of each current fueling station.
3. Follow the on-screen instructions to place each current station in its appropriate location. Do this by dragging the letter icon of the station to its location on the gridded street map.
4. After all three stations are properly located, click the "Please Select One" drop down menu and choose "Segment." Again, follow the on-screen directions to draw line segments. Click on the "Make It" button to actually draw the segment. If you need help, click the "Terms" button at the bottom left-hand corner of the screen to find out more about segments.
5. After all three stations have been connected via three line segments, click the "Please Select One" drop down menu and choose "Midpoint." Again, follow the on-screen directions to draw the three lines' midpoints. Don't forget to click on the "Make It" button to actually draw the midpoints.
6. After you create the midpoints for each of the three segments, click the "Please Select One" drop down menu and choose "Perpendicular Bisector." Again, follow the on-screen directions to draw the three lines' perpendicular bisectors.
7. Use your drawing to determine the best location for the new fueling station. Write the location of the new fueling station in Table 1.

Table 1. Fueling Stations' Locations

Fueling Station's Letter	Location
New Fueling Station	

Do You Understand?

1. Describe how you arrived at the best location of the new fueling station.

2. Describe another method you could have used to best determine the location of the new fueling station.