



Fleet Manager

STEM Sims

Lesson 1: Miles per Gallon

The price of gasoline is one of the main factors that determine the operating costs of a vehicle. For a company with a large fleet of vehicles, a small rise in the price of fuel can translate into much higher operating costs for the company and much lower profits. Can you determine a vehicle’s fuel mileage? Fuel up and start your engine.

Doing the Science

1. Start the Fleet Manager Simulation.
2. Select one of the vehicles in the fleet.
3. Select the “Use” button, then the “Drive” button. When the vehicle completes the route, select the “Status” button.
4. Record in Table 1 below the Vehicle name, Total Distance Driven, and Fuel Used.

Table 1. Vehicle Data

Vehicle	Total Distance Driven (miles)	Fuel Used (gallons)	Miles per Gallon (mpg)

5. Calculate and record in Table 1 the Miles per Gallon rating of the vehicle.
6. Close the box by selecting the “X” in the upper right-hand corner, and then select the “Fleet” button.
7. Select a different vehicle and repeat steps 3-6. Test a total of five different vehicles. Make sure to record your data in Table 1.

What Do You Understand?

1. Which vehicle that you tested was the most fuel efficient? Explain why you chose this vehicle.

2. Find out the current average price of gasoline per gallon in your area. Based on this value, determine how much the fuel would have cost to complete the trip for the most fuel-efficient vehicle. Show the work for your calculation.

3. The number of electric cars on the roads have increased over the past few years. Do you think the “fuel” for electric cars is a limited or unlimited resource? Provide a reason to support your answer.

4. Do you think the number of electric cars on the roads will increase or decrease over the next few years? Provide a reason to support your answer.

5. Name a resource that is unlimited. State why this resource is unlimited.

