



Fleet Manager

STEM Sims

Lesson 1: Miles per Gallon

The price of gasoline is one of the main factors that affect the costs of driving a vehicle. For a company with a large fleet of vehicles, a small rise in the price of fuel can result in much higher costs for the company. Higher costs often mean that the company will make less money. Can you find out a vehicle's fuel mileage? Get ready to have a gas.

Doing the Science




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

Table 1. Vehicles and Fuel Efficiency

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. To calculate the Miles per Gallon, divide the Total Distance Driven by the amount of Fuel Used.

Q.A. What does it mean to say a vehicle is "fuel efficient?"

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 on the previous page.

What Do You Understand?

1. Is gasoline a limited or unlimited resource? Provide a reason to support your answer.

2. 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.

3. 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.

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

5. Which vehicle that you tested was the most fuel efficient? Explain why you rated this vehicle as the most fuel efficient.

6. Why do you think most vehicles on the road today run on gasoline?

7. 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 you stated in question #5. Show the work for your calculation.
