



## Drive It Green Lesson Plan

**Objective:** Students will learn about the fuel efficiency of cars and gain an understanding of how that affects the environment.

**Time:** 30-45 minutes

**Materials:** Student Worksheets, Access to [www.fueleconomy.gov](http://www.fueleconomy.gov) for car labels, car examples in Drive It Green lesson in a box, PowerPoint presentation

**Background:** There are many considerations to make when making a large purchase such as buying a car. One of the considerations is fuel economy which is a measure of how many miles a car can travel on a gallon of fuel. The U.S. EPA requires that cars have labels that give consumers information on fuel economy, fuel costs, and environmental impact. This lesson is designed to show students how to read a car label and to understand that the more fuel efficient a car is, the better it is for the environment.

### **Procedure:**

1. Warm-up – Ask students to imagine they are older and they are buying their first car. What would be important to them in deciding what car to purchase? Try to cover all of these categories:
  - a. Price?
  - b. Car brand, like Chevrolet or Porsche?
  - c. Size, like sedan or minivan?
  - d. Look of the car, like color or style?
  - e. Safety?
  - f. Fuel economy, miles per gallon?
  - g. Environmental impact?
2. Based on what the students said is important to them, have them choose a car either from the lesson in a box materials or on <https://www.fueleconomy.gov/feg/findacar.shtml>. Give them a car label or show them how to bring it up online.
3. Show students a sample car fuel economy label and explain each of the fields while the students look at the car label they have:
  - a. Fuel economy – a measure of how many miles the car travels per gallon of fuel. The label also indicates the type of fuel used, gasoline, diesel, hybrid, or electric.
  - b. Fuel consumption – how much fuel the car uses in order to travel 100 miles
  - c. Annual fuel cost – how much it costs to purchase fuel for the car for a year
  - d. Greenhouse gas rating – a score between 1 and 10 (10 is best) based on how much carbon dioxide the car puts into the air from burning fuel to power the car
  - e. Smog rating – a score between 1 and 10 (10 is best) based on how much air pollution the car puts into the air from burning fuel to power the car
  - f. Fuel cost (savings or spending) over 5 years – This compares the car you are looking at to an average new car with the amount spent of fuel over a five year period.
4. Now have students select another car that has better fuel economy than the car they have chosen already. What characteristics would they look for to find it? It could be smaller or newer or could be a hybrid or electric vehicle.

5. Give out labels for this second selection or have students find it online at <https://www.fueleconomy.gov/feg/findacar.shtml>.
6. Have students fill out a car label for each of the two cars they selected and answer the questions on the worksheet.
7. Bring students back together and discuss the worksheet questions. Emphasize that the choice of car has an impact on the environment through the fuel economy of the car. Hybrid and electric cars have a much smaller environmental impact than traditional gasoline powered cars.