

Pretzel Power Student Guide

Background

Oil and natural gas are widely used as transportation fuels. Most of our cars run on petroleum. Some vehicles are more efficient than others and allow us to go farther with less fuel while being kind to the environment.

Question

How might transportation choices affect our ability to get around?

Materials

- One 3" x 5" card or label
- Bag of 10 pretzels from your teacher

Procedure

1. Think about the kind of car you would like to drive.
2. Use a computer and look at the fuel efficiency of your choice using www.fueleconomy.gov.
3. On your card, record the name of the car, the year it was made, how many miles per gallon it travels, and how many passengers can fit in the car.
4. Your teacher will give you a bag of pretzels. Each pretzel represents one gallon of gasoline and the bag represents one tank of gas.
5. **For Round One:** You will be "driving" from "Home" to work in "Near Town" and back home again while using only 5 gallons of gasoline (5 pretzels). You will be marking the distance driven by taking steps heel-to-toe. One step represents one mile driven.
 - Eat one pretzel. Take as many heel-to-toe steps as your car would be able to drive on one gallon of gasoline. Do not take any more steps than your car can drive.
 - Eat another pretzel and again take as many steps as your car can drive on one gallon of gasoline. Continue this until you have used five "gallons of gasoline" (eaten five pretzels).
6. **For Round Two:** In this round you will be traveling to "Far Town" in your car. Decide if you should carpool, and find passengers for your car, or join another person's carpool.
 - If you carpool, all members combine their pretzels. Only one person may eat a pretzel at a time.
 - When your teacher indicates the start of Round Two, begin stepping as a group as you drive to Far Town. Count the steps together for the car you chose to drive.



