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Electric Cars—Then and Now

Use with p. 84

Name _____

Listing Advantages/Disadvantages

List the advantages and disadvantages of owning an electric car rather than a gas-powered one.

Advantages: _____

Disadvantages: _____

Reading for Details

Fill in the circle beside the best answer to each question.

- When were the first electric cars produced in this country?
 1900 1925
 1930 1970
- What was the speed of these first electric cars?
 40 mph 30 mph
 60 mph 20 mph
- How many miles can modern electric cars travel before their batteries need recharging?
 200 60
 120 75
- Which state passed a law requiring that 10% of all cars a manufacturer sells starting in 2003 be zero-emission vehicles?
 Michigan Florida
 Texas California
- Engineering students build electric cars to enter in what race every year?
 "Tour of the Sun" "Tour de France"
 "Tour de Sol" "Trip of the Moon"

Extension

Write a list of questions to use in surveying people on their thoughts about electric cars versus gasoline-powered cars. Conduct your survey and graph the results.

Electric Cars—Then and Now

Some of the nation's first cars were electric. They were manufactured at the turn of the century, the year 1900. Early cars ran on batteries, gas, and steam, but the most popular were the electric cars.

Many people preferred the quiet, smokeless electric cars. The first electrics were billed as the "Ultimate Driving Machines." They went distances of 30 to 40 miles at 30 mph, just a bit slower than the gasoline-powered automobiles of that time. The quiet operation of the electric car was a big plus in this day when many horses still traveled the roads. However, soon people owning electric cars found it annoying to stop and recharge their batteries every 30 miles. Also, the drivers wanted to go faster, and new models of gas cars, unlike new electric cars, provided a bit more speed. Soon the electric car companies went out of business. By the 1920s, electric cars had almost disappeared.

In much more recent history, the State of California passed a law demanding that by the year 2003, 10% of all cars a manufacturer sells must produce no tailpipe emissions. That means starting in 2003 there will be 600,000 new zero-emission vehicles (ZEVs) on California roads each year. Several northeastern states are expected to pass this law also.

California has passed this law because gasoline-powered cars exhaust a lot of pollution into the air. The atmosphere becomes dangerous for people to breathe. It is important to look for alternative transportation to cut down on the smog that results from air pollution. But some people point out that power plants producing the extra electricity needed for electric cars will also release pollutants into the air.

General Motors, the largest American car company, is committed to building electric cars. Their question is, will the American people want to buy them? Carmakers are

concerned that people have not changed. They still want to travel as far and fast as possible.

In 1973, manufacturers again started building electric cars because suddenly we had an acute shortage of gasoline. When gasoline prices stabilized, interest in electric cars died down again. After all, there was not too much to get excited about. The cars manufactured in the 1970s performed much like the original cars available at the turn of the century. Most went about 30 mph and had a range of 30 to 50 miles. One company located in Florida, Commuter Vehicles, manufactured more than 4,000 electric cars between 1974 and 1982. This same company offered a car in 1991 that could travel 60 mph.

Other designers have experimented with many different kinds of alternatively powered automobiles. Some designs have batteries and solar panels for dual power. Some people have converted today's gasoline-powered cars into cars that are powered by both electricity and gasoline. Automotive engineering students in colleges and universities build electric cars for projects and enter a race every year called the "Tour de Sol," or the "Trip of the Sun."

Today's electric cars still face an uphill battle when it comes to pleasing consumers. Modern electric cars can travel only 120 miles at 60 mph before needing to be recharged, so it still is not possible to take a long, uninterrupted trip in them.

General Motors is committed to producing before 2003 a zero-emission car that has smaller batteries and can go farther and faster. Change is coming, sooner than you'd think. In the year 2003, when you come home from school or work, you may have to remember to plug in your car.