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Fueling Our Vehicles

Many Americans, especially those who live in suburbs, rely on their cars for transportation every day. People think nothing of driving 30 miles to work each day. Families make daily trips back to school or other playing fields so kids can participate in sports games or get some kind of lessons after school. It's a simple fact that Americans drive lots of miles each year. Europeans also rely on their automobiles. People in highly populated developing countries like India and China want the freedom that owning a car brings. As the world population grows, so does the number of vehicles and the miles of roads.



Most cars run on gasoline that is made from oil pumped from underground. Oil is one type of fossil fuel. The other two types of fossil fuels are coal and natural gas. Fossil fuels come from the remains of ancient plants and animals. As earth's environment changed over millions of years, these ancient remains were compressed by layers of rock and soil to create fossil fuels. These deposits occur only in certain places on earth. Once the deposits of ancient fossil fuel are used up, their source of energy is completely gone. Fossil fuels are called a non-renewable source of energy because they cannot be replaced.



Name _____

Researchers are working on designing new kinds of engines that can use other types of fuel that are renewable. That means we can keep making the fuel from sources that won't eventually run out. Biofuels are one kind of renewable energy. Biofuels are made from the oils in plants like corn or even sunflowers. These plants are grown just to make fuel for engines designed to run on biofuel. There are already vehicles that run on ethanol, one kind of biofuel.

The answers to the problem of how to make enough fuel for all the vehicles that people want without damaging the environment are complicated. Even though biofuels are renewable sources of energy, growing the plants uses valuable cropland that could grow food for the world's increasing population. Creating new cropland destroys existing habitat for plants and animals and eliminates place for people to live too.

Finding clean and affordable sources of energy continues to be a challenge for the future.



Name _____

Name: _____ Date: _____

Multiple Choice Questions

Circle the correct answer.

1. The demand for cars is greatly increasing in

- a. China
- b. Europe
- c. The United States
- d. Mexico

2. Regular gasoline for cars comes from

- a. Oil
- b. Coal
- c. Natural gas
- d. All of the above

3. Which of the following is a fossil fuel?

- a. Electricity
- b. Coal
- c. Corn oil
- d. None of the above

4. Fossil fuels are

- a. Reputable
- b. Non-reputable
- c. Renewable
- d. Non-renewable

5. Biofuels are made from what kind of oil?

- a. Fossil oil
- b. Plant oil
- c. Both a. and b. above
- d. None of the above

6. Problems associated with biofuels include

- a. Destroying habitats
- b. Possibly decreasing the food supply
- c. Both a. and b. above
- d. None of the above



Name _____

Name: _____ Date: _____

Short Answer Questions

1. Explain how where a person lives influences whether or not they own a car and how much they drive it.
2. Does your family own a car? Keep track of the number of trips made and miles traveled by your family for one week. How could your family reduce the amount of gas used?
3. Explain where fossil fuels come from.
4. Explain the difference between renewable and non-renewable sources of energy.
5. What is a biofuel?
6. Have a class discussion about what families can do to reduce, reuse and recycle to conserve energy.
7. Would you like to do research or work on inventing new sources of fuel and energy? Explain why or why not.



Name _____

Answer Key

Multiple Choice

1. a.
2. a.
3. b.
4. d.
5. b.
6. c.

Short Answer

1. People who live in urban areas can use public transportation but those who live in suburbs typically must commute by car.

2. Individual response

3. Fossil fuels come from the remains of ancient plants and animals. As earth's environment changed over millions of years, these ancient remains were compressed by layers of rock and soil to create fossil fuels.

4. Once the deposits of ancient fossil fuel are used up, their source of energy is completely gone. Fossil fuels are called a non-renewable source of energy because they cannot be replaced. Researchers are working on designing new kinds of engines that can use other types of fuel that are renewable. That means we can keep making the fuel from sources that won't eventually run out.

5. Biofuels are one kind of renewable energy. Biofuels are made from the oils in plants like corn or even sunflowers that are grown just to make fuel for engines designed to run on biofuel.

6. Individual response

7. Individual response

