

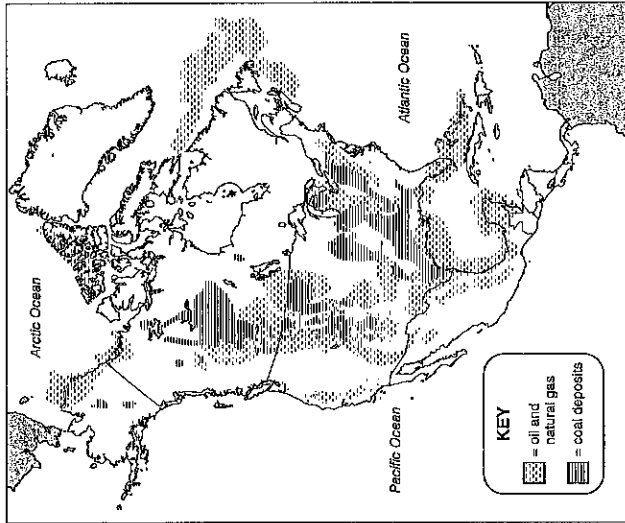
Name \_\_\_\_\_

## Fossil Fuels

North America is rich in oil, natural gas, and coal. These are all types of fossil fuels. Fossil fuels were formed from the remains of animals and plants that lived millions of years ago. Fossil fuels are *nonrenewable*, meaning they cannot be replaced once they're used up because they take millions of years to form. Over half the energy that the United States and Canada use comes from fossil fuels. Oil and natural gas are found in large underground deposits and are reached by drilling. Oil is used to make gasoline, diesel fuel, and heating oil. Natural gas is used mainly to heat buildings and for cooking.

Coal is a mineral that is mined using heavy machinery and explosives. It is burned to make electricity and to heat buildings. Unfortunately, burning coal, as well as oil and natural gas, causes pollution that most scientists believe is contributing to global warming. The process of removing coal from the ground can also cause a lot of damage to the environment.

Deposits of oil, natural gas, and coal tend to be found in the same area. There is a great deal of coal in the Appalachian Mountains in the eastern United States and southwest of the Great Lakes. Natural gas can be found in the Gulf of Mexico area, as well as southeast of the Great Lakes. Large oil fields are found off the coast of Alaska and in California, Texas, and Mexico.



Name \_\_\_\_\_

## Fossil Fuels

A. Read each statement. Circle **yes** if it is true or **no** if it is false. Use the information on the other page to help you.

1. Oil, natural gas, and coal are fossil fuels. Yes  No
2. North America will never run out of coal. Yes  No
3. Half the energy used in the U.S. comes from natural gas. Yes  No
4. Natural gas is used to heat buildings and for cooking. Yes  No
5. Coal mining does not do much damage to the land. Yes  No
6. Fossil fuels cause pollution. Yes  No
7. Fossil fuels take millions of years to form. Yes  No
8. People use explosives to find oil. Yes  No
9. Coal is burned to make electricity. Yes  No
10. People use oil to make gasoline and diesel fuel. Yes  No

B. What are two problems associated with using coal for fuel?

1. \_\_\_\_\_
2. \_\_\_\_\_

C. Use the map on the other page to help you answer the questions.

1. Which part of the United States has more coal, eastern or western? \_\_\_\_\_
2. In which two oceans are there large deposits of oil and natural gas? \_\_\_\_\_



## Renewable Energy

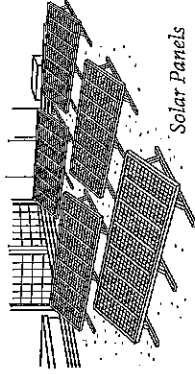
In addition to hydroelectricity, there are several other sources of renewable energy used in North America. Two of the most important sources of renewable energy are the sun and the wind.

### Solar Power

Solar power is energy that we get from the sun in the form of heat and light.

Solar power that can be used to heat water is called *solar thermal power*. In North America, the most common use of solar thermal power is for heating swimming pools. The first solar thermal power plant was built in the Mojave Desert in 1984.

Even though this project was a success, few solar thermal plants have been built since. Solar power can also be used to create electrical energy. Solar panels collect light and turn it into electricity that can be used in homes and businesses. Large systems can even generate enough electricity to meet the needs of entire cities. However, although sunlight is free, ways of collecting and converting it to electricity are still very expensive, so there are not many large solar power plants in North America. Some of the largest solar plants are located in Ontario, Canada, and in Nevada and California in the U.S.



Solar Panels

### Wind Power

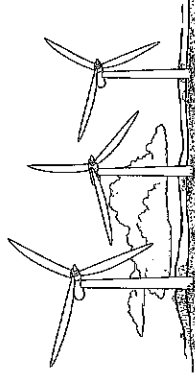
The same wind that lifts a kite into the air can also generate electricity for thousands of homes. People collect the power of the wind using *wind turbines*.

Wind turbines are huge towers with giant blades that are spun by the wind. The spinning turbines power generators that make electricity.

When many wind turbines are built together in one place, they are called a wind farm. Wind farms are built in places that get a lot of wind.

In North America, the vast majority of wind farms are found in the United States. However, there are some in Canada and Mexico as well.

The largest wind farm in the world has 627 turbines and is located in Texas. This wind farm makes enough electricity to power over 230,000 homes!



Wind Turbines



## Renewable Energy

A. Find and circle the solar and wind power words in the word puzzle. Words may appear across, down, or diagonally.

E C O L L E C T B V H T H E  
 N G N M O Z E T N E K G T L  
 E R X R M W P O A J Y E U E  
 R S P E C O N V E R T M R C  
 G W I N D F A R M W Y I B T  
 Y H R E I M A T A S Y B I R  
 E S E W U M G T B E A R N I  
 S O L A R P A N E L T U E C  
 R R T B I E M H E R A T O I  
 N O H L H W S U O Y O D H T  
 D Q G E N E R A T O R U E Y  
 E G E H T E T U C O S Y A S

- blades
- collect
- convert
- electricity
- energy
- generator
- heat
- renewable
- solar panel
- turbine
- wind farm

B. Choose three words from the word box and write a sentence using each word. Underline the words you used from the box.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_