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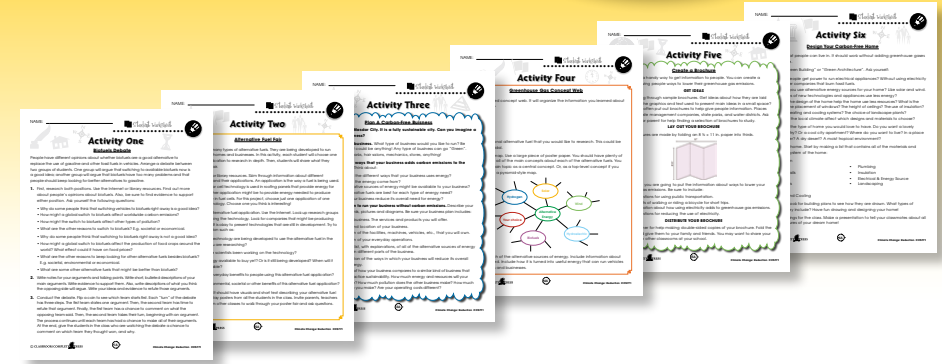
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NAME: _____

Before You Read



Green Buildings



1. Have you ever heard the word "green"? It would be used to talk about products or services that are environmentally friendly. What do you think a "green building" is?

2. Complete each sentence with a word from the list. Use a dictionary to help you.

toxic fibers	reducing alternative	recycle reservoir
-----------------	-------------------------	----------------------

- a) _____ sources of energy do not emit as many greenhouse gases than burning fossil fuels.
- b) _____ substances can harm people's health.
- c) People can help lessen the effects of climate change by _____ greenhouse gas emissions.
- d) One way to _____ is to make something new out of something old.
- e) A source of drinking water is called a _____.
- f) _____ are thread-like substances used to weave textiles, carpets, and fabrics.



Reading Passage

NAME: _____



Green Buildings



New laws are now being passed to encourage new buildings to be "green". **Green buildings** are designed to lower greenhouse gas emissions. They do this by using less toxic materials and reducing waste. Green buildings can lower greenhouse gas emissions in many ways.



Green (eco-friendly) home

Remember that the manufacturing of products results in a lot of greenhouse gas emissions. Green buildings use more recycled products. Things like carpets made from recycled fibers and wood reclaimed from older buildings. Green buildings may also use products from industries that have reduced greenhouse gas emissions.



What is a green building?

Green buildings also use less energy for heat and light. They have windows and skylights placed to allow a lot of natural light into the inside spaces. They can be positioned to allow for direct sun in the winter, and shade in the summer. This reduces the need for heating and cooling. Many green buildings also use **solar cells** and other alternative sources of energy.

Some green buildings are also designed to use less water. This helps save energy, too. Water must be pumped from reservoirs or other natural sources. Water must also go through a treatment process to be purified. This also uses energy. Green buildings may have rain collection or water recycling systems. These save both water and energy.

NAME: _____

After You Read



Green Buildings



1. Circle the word **TRUE** if the statement is TRUE **OR** Circle the word **FALSE** if it is FALSE.

- a) Green buildings are designed to lower greenhouse gas emissions.
TRUE FALSE
- b) Green buildings use more energy to operate than other kinds of buildings.
TRUE FALSE
- c) Using less water is one way to lower greenhouse gas emissions.
TRUE FALSE
- d) Recycled products use more energy to make than products made from raw materials.
TRUE FALSE
- e) Green buildings use less energy for heat and light than other kinds of buildings.
TRUE FALSE

2. Green buildings can help lower greenhouse gas emissions. Describe 5 features that do this.



After You Read

NAME: _____



Green Buildings



3. Answer each question with a complete sentence.

- a) Compare and contrast green buildings to regular buildings.

- b) Explain how the position of a building could be used to lessen the costs of heating and cooling the building.

Research

4. Find out more about green building technology.

Use the Internet or library resources. Research technologies that are used in green buildings. Find out more about the following.

- Low VOC paints.
- Solar panels.
- Insulation.
- Radiant floor heating.
- Tankless water heaters.
- Nanotechnology.
- Other building technologies of your choice.

Create a poster. Showcase 5–10 green building technologies. Use images and short captions to help teach people about ways to go green in the home. Hang posters around your school, apartments or community centers.



Create a pamphlet of transportation choices in your region.

Help the people in your community make transportation choices that will help lower greenhouse gas emissions. Many people drive individual vehicles for every trip. However, in many cases there are other choices that use less fossil fuels. You could help people make better choices. Create and distribute a pamphlet of transportation choices in your area.

First, research the transportation choices around where you live. Ask yourself the following questions:

- Where do people travel most often?
- What areas do people live in?
- Where do people work and go to school?
- Where are other common destinations? Like parks, museums and airports.

Then, visit your local planning department. Or, department of transportation, office or website. Look for the following information:

- Bus routes.
- Commuter train routes.
- Carpool lanes.
- Bike paths.
- Pedestrian trails.
- Any other form of public transportation in your area. Like ferries, trolleys or subways.

Now, compile all of the information you found into a helpful pamphlet. A pamphlet has a lot of information in a little space. To cover all the information, use lists and brief descriptions. Use graphics, like maps, to help show people other choices besides driving for common routes and destinations. Include a short description of the benefits to people and the environment of making different transportation choices. Design an interesting cover that gets people's attention and tells them what the pamphlet contains.

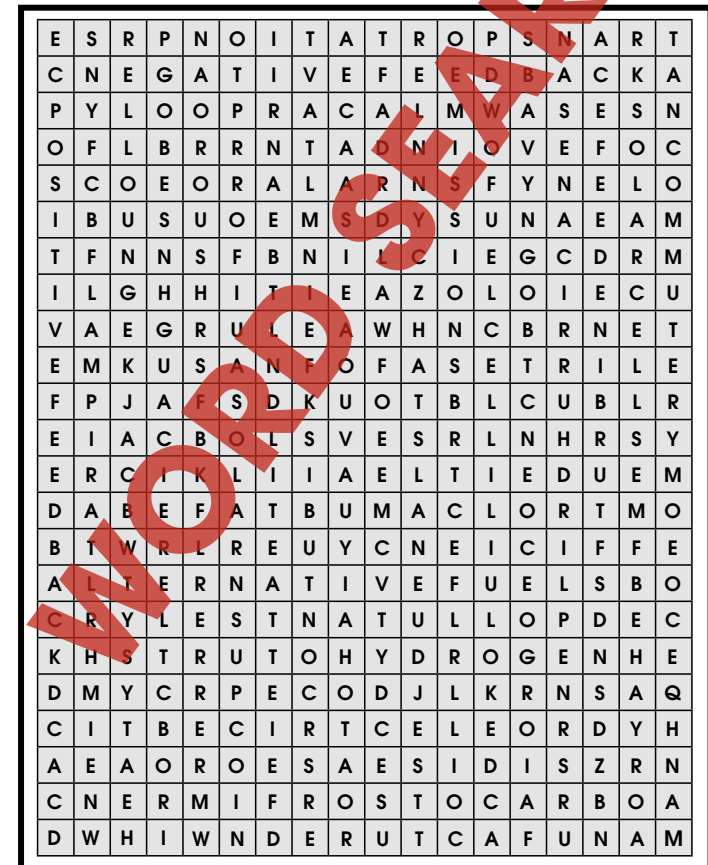
Finally, distribute your pamphlet. Ask your teacher for help making copies. Leave your pamphlets in areas that people commonly drive to. Like grocery stores, community centers and shopping malls.



Word Search

Find all of the words in the Word Search. Words are written horizontally, vertically, diagonally, and some are even written backwards.

- | | | | |
|-------------------|---------------|-------------------|----------------|
| alternative fuels | emissions | manufactured | solar |
| biofuel | fossil fuel | Masdar | solar cells |
| carpool | fuel cell | negative feedback | transportation |
| commuter | hybrid | pollutants | turbine |
| dam | hydroelectric | positive feedback | urban |
| efficiency | hydrogen | renewable | wind |



Comprehension Quiz

Part C

Answer each question in complete sentences.

1. Explain how changes in **greenhouse gas emissions** will affect Earth's average temperature. 4

2. Describe two alternative fuels that can be used to power vehicles. Be sure to explain the source of energy in each fuel. 4

3. Describe two alternative sources of energy that can be used to produce electricity for homes and other buildings. 4

4. Explain how urban planning can affect climate change. 5

SUBTOTAL: /17

Alternative Sources of Energy



Wind turbines and solar cells can be used to generate electricity without greenhouse gas emissions.



Green Buildings



3. Answer each question with a complete sentence.

a) Compare and contrast green buildings to regular buildings.

b) Explain how the position of a building could be used to lessen the costs of heating and cooling the building.

3.

a) Green buildings have less greenhouse gas emissions, use less toxins, and reduce waste.

b) Direct sun in the winter and shade in the summer.

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EASY MARKING ANSWER KEY





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