

## PART THREE

Identify What Countries  
All Over the World, Like  
the USA and Germany,  
are Doing to Help Solve  
These Problems





Online Chat



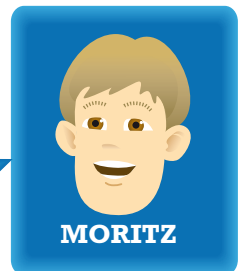
"Wow, those states are doing some great work!

Moritz, what is Germany doing to solve the problem of climate change?"

"Well, I am not too sure about what the government is doing, but I have seen some changes here in Munich.

Here are some of the things I have noticed:

- Most public trashcans have four separate compartments for paper, glass, packaging, and everything else.
- More and more of our neighbors have installed solar panels on their roofs.
- When I ride the train, I can see new windmills all over the countryside.
- Many of my friends ride their bikes to school.
- My parents use a lot of those new, funny-looking, energy-saving light bulbs.



Dr. Blume, perhaps you can help me answer Alicia's question."

**BRAINSTORM #3**

- What technologies are you aware of that are being developed to reduce global warming?
- Have you observed any of these new technologies in your community?
- Can you match the following “green” technologies with the appropriate geographic feature?

- **Windmills**
- **Solar**
- **Geothermal**
- **Hydro-electric**

**Online Chat****DR. BLUME**

“Sehr gut, Moritz! Those are all very good observations.

Perhaps I can tell you in a little more detail about how certain ‘green’ technologies are being used in Germany.”

## Online Chat



DR. BLUME

## "WIND ENERGY



- The United States and Germany are the two leading nations in terms of number of windmills as of 2008.
- Germany and the USA plan to install even more windmills as the two countries strive to harness offshore wind currents, for example in the North Sea and Pacific Ocean."

## Installed Wind Power Capacity (2007)

Rank	Country	Power in Megawatts
1	Germany	22,247
2	United States	16,818
3	Spain	15,145
4	India	8,000
5	China	6,050



**"BIOFUELS"****DR. BLUME**

- Around 1 in 8 gas stations in Germany offer Biodiesel.
- In 2007, around 5.2% of the gas sold in Germany was Biofuel."

**DEFINITION  
ALERT****BIOFUELS**

**A fuel composed or produced from biological raw materials.**

Online Chat



DR. BLUME

"SOLAR



- In, 2006, Germany generated half of the world's solar electric power.
- Of the 20 largest solar-panel manufacturers, 15 are located in Germany.
- German exports accounted for 15% of worldwide sales of solar panels in 2007."





## Online Chat



"The Reichstag, the building that houses the German federal parliament, is a great example of how these technologies are combined to serve the public good.



Germany's parliament building is designed to make the most of natural light and the flow of air. Electricity and heat are provided by biofuel generators in the basement. The excess heat is then stored in great underground chasms to warm the buildings during winter — when cold from the outdoors is stored underground to cool the building again in summer. The Reichstag, originally built in the 19th century, now gets 60% of its power from renewable energy, and if all goes to plan will soon run entirely on renewables."

**DR. BLUME****ALICIA**

"Wow, that is some impressive progress! I found some information too about how change is happening in the United States. We just do things a little differently."



## Online Chat



DR. DAVIS

"Quite right, Alicia.

While more and more is happening at the national level, much is being done already at the local and state levels by concerned people and businesses!

For example, I was just in New York City recently and saw this new amazing billboard. Have you ever seen Times Square with all its colorful lights? Ever wondered how much energy it takes to power all of those lights?



Well, the Ricoh Americas Corporation has decided to make a billboard that is completely powered by wind and solar energy.

## Online Chat



By generating its own electricity — enough to light six homes for a year — the sign could save as much as \$12,000 to \$15,000 per month, according to Ricoh, which estimated that the sign would prevent 18 tons of carbon from being spewed into the air yearly.”

8



DR. DAVIS



ALICIA

“What happens at night or if there is no wind? Won’t the billboard go dark?”

“That is indeed a possibility, Alicia. Even though this particular sign is capable of storing energy for four days with no wind or solar power, the company is perfectly willing to take this risk if it means a cleaner, more efficient environment for everyone.”



DR. DAVIS

## Online Chat



DR. BLUME

"Wow, that's pretty innovative. I had not heard of that, Dr. Davis. I know of another initiative in California that is similar. A friend of mine who is a professor at Stanford University volunteers for Grid Alternatives, a non-profit organization that installs solar energy systems on the homes of low-income residents. Families using these solar energy systems have seen their electric bills fall by about 75%!"



Used with permission from Grid Alternatives, Oakland, California.

"That volunteer work reminds me of when I helped my parents build a house for Habitat for Humanity earlier this year! I wonder what I can do to help the environment!"



ALICIA



Used with permission from the University of Notre Dame Alumni Association, Notre Dame, Indiana.



**ACTIVITY #3:** News Headlines

Use print or online resources to find three news headlines pertaining to the environment. You should find headlines from one local, one national, and one international source.



**1. Local Headline:** \_\_\_\_\_

**Synopsis of Local Article**

Who: \_\_\_\_\_

What: \_\_\_\_\_

Where: \_\_\_\_\_

When: \_\_\_\_\_

**2. National Headline:** \_\_\_\_\_

**Synopsis of National Article**

Who: \_\_\_\_\_

What: \_\_\_\_\_

Where: \_\_\_\_\_

When: \_\_\_\_\_

**3. International Headline:** \_\_\_\_\_

**Synopsis of International Article**

Who: \_\_\_\_\_

What: \_\_\_\_\_

Where: \_\_\_\_\_

When: \_\_\_\_\_

What, if anything, do these articles have in common? What conclusions can you draw?

**Bonus:** Do any of your classmates speak a foreign language? If so, use their help to extend your research to non-English language newspapers.