

Activity

Use the Internet

How much does energy really cost?

You know that it costs money to produce energy. Using energy also can have an impact on the environment. For example, coal costs less than some other fuels. However, combustion is a chemical reaction that can produce pollutants, and burning coal produces more pollution than burning other fossil fuels. How do energy providers convince consumers that their service is the most cost-efficient and the least polluting?

Recognize the Problem

What are the costs and environmental impacts of various energy-producing sources?

Form a Hypothesis

Form a hypothesis about which energy source you think will have the lowest cost and which will have the least impact on the environment.

Goals

- **Identify** three energy sources that people use.
- **Determine** the cost of each source.
- **Describe** the environmental impact of each source.
- **Describe** which energy source is most cost-efficient as well as the one which causes the least environmental impact.

Data Source

SCIENCEOnline Go to the Glencoe Science Web site at science.glencoe.com to get more information about various energy sources and services and for data collected by other students.

Test Your Hypothesis

Plan

1. Think about the various sources of power used in different areas of the United States and make a list of possible energy sources to investigate.
2. Find out the cost of using three of these energy sources for 1 h.
3. Determine if any of your sources has a negative impact on the environment. Which sources are renewable? Do any of the sources harm the environment?
4. Record your data in the table on the next page.
5. Write a summary describing which of your three energy sources is the best for producing 1 h of energy. Consider the cost of the energy and the environmental impact. Provide facts from your research to support your conclusions.

Do

1. Make sure your teacher approves your plan before you start.
2. Go to the Glencoe Science Web site at science.glencoe.com to post your data.

Activity (continued)**Data and Observations**

Energy Sources		
Energy source	Cost for 1 h of energy	Environmental impacts
Energy source 1		
Energy source 2		
Energy source 3		

Analyze Your Data

1. Of the energy sources you investigated, which is the most expensive to use? The least expensive?

2. Which energy source do you think has the most impact on the environment? The least impact?

Draw Conclusions

1. Find this *Use the Internet* activity on the Glencoe Science Web site at science.glencoe.com. Post your data in the table provided. Compare your data to that of other students.

2. Of the energy sources you investigated, which is the least expensive energy source? Which is the best choice to use? Why or why not?

3. Of the energy sources you investigated, how did the environmental impact of that power influence your choice of the best energy solution?

4. What data support your decision?

Communicating Your Data

Make a poster of magazine pictures to illustrate impact on the environment for each of the three energy sources.