

Field Study: Reducing Dependence on Fossil Fuels

The United States produces only about 11 percent of the world's oil but consumes almost 26 percent of that total. This petroleum provides about 40 percent of the energy used in the country. About 60 percent of oil is used in transportation. How can we reduce our dependence on oil and other fossil fuels?

Materials:

pencil
ruler
graph paper
calculator



Procedure:

1. Use the pencil, paper, and ruler to make a four-column table with eight rows. List each of the statements below in the first column, one per row.
 - Give incentives for building energy-efficient houses and other buildings.
 - Build power plants that use alternative energy such as nuclear energy, hydropower, and wind energy.
 - Give incentives for gasoline conservation efforts.
 - Build more fuel-efficient motor vehicles.
 - Increase prices at the gas pumps to encourage conservation.
 - Develop more domestic petroleum resources.
 - Develop and build public transportation systems.
 - Increase taxes on conventional fuels.
2. Title your chart "How can the United States reduce dependency on fossil fuels?"
3. Survey 5 adults to determine the three most effective ways of those listed to reduce the U.S. consumption of fossil fuels.
4. Record the responses with tally marks in the second column of the table.
5. Bring in your results to class on _____.

6. As a class, compile the results, and determine the number of survey participants who responded to each suggestion. Put these values in column three.

7. Now determine the percentage of survey participants who responded to each suggestion. Put these values in column four. (hint: use a calculator to divide the number of responses in each category by the total number of participants)

Analysis and Conclusion:

1. Which three statements do you think would be most effective in reducing fossil fuels?

2. According to the results, what were the three most effective ways of reducing fossil fuel consumption?

3. Are any of these methods currently being used in your community? Which ones?

4. Which of these possibilities do you think would be most easily implemented in your community? Why?