

Researching Energy Sources

Do you know where your electricity comes from? Do you know what kind of power plant produces it? In this research project, you will investigate energy sources used to generate electricity. Each group in the class will research one type of power plant. When all the groups have completed their work, the class will review and discuss the information. Each group will be responsible for providing evidence that demonstrates the pros and cons of their energy source.

The final goal of this project is for your class to determine the most efficient, cost-effective, and environmentally safe method for generating electricity.

Sources of energy for generating electricity include coal, oil, natural gas, nuclear, hydroelectric, solar, wind, and geothermal.

MATERIALS



Where to find information on the Internet:		
www.energy.gov	www.fe.doe.gov/education/index.html	www.eere.energy.gov/biomass
www.ase.org	http://energy.inel.gov/renewable	www.eia.doe.gov
www.energy.ca.gov	www.ne.doe.gov	www.eren.doe.gov

DIRECTIONS



- Choose one of the energy sources listed in the introductory paragraph.
- Make a list of facts about this energy source. Come up with at least 10 pros and 10 cons. Cover these topics:
 - How much does it cost to build a power plant for generating energy using your source?
 - How much does it cost to maintain this type of power plant?
 - How much does the energy source cost to use?
 - How energy-efficient is this source?
 - How does the use of your energy source affect human health?
 - What are the environmental issues associated with using your energy source?
 - How long into the future is this source projected to last?
- As you make your list, fill in details to explain each point.
- Prepare a one-page handout for your classmates which summarizes each point.
- Prepare a poster highlighting two or three of the most important things you would like classmates to remember about your energy source.

ACTIVITIES 

1. Decide as a class how you would like to learn about all of the energy sources. Some ideas include:
 - Have each group make a five-minute presentation to the class.
 - Make a booklet for each student that contains the summary sheet from each group. Each student should come up with a list of three questions they have after reading the booklet. Then give each student an opportunity to ask one question of another group.
2. Once you are familiar with the pros and cons of each source, consider these three questions separately:
 - a. Which one is the most efficient for your area of the country?
 - b. Which one is most cost-effective?
 - c. Which one is the safest for your environment?
3. If you were part of a commission studying which type of power plant to build in your community, how would you balance these three concerns? Is there one source which is best in every category?
4. Come up with a final recommendation for the best energy source for your community. Your class might choose to:
 - Form new groups, each with one person who studied each energy source. Each group should act as a commission responsible for making a recommendation to your community.
 - Or, have each person submit a statement about the best overall energy source for your community. Your teacher can divide the class into groups of students who share the same conclusion. Then, hold a debate among the groups.