



Time Needed

- 5 minutes at the end of a previous class period
- 1 class period

In this FACTivity, you will consider the source and availability of different types of energy for heating your school. The questions you will answer in this activity are:

1. What is the most reliable source of energy for our school right now?
2. What might be the most reliable source of energy for our school in 10 years?

Method

At the end of a previous class period, take approximately 3 minutes to do the following activity.

In a rapid brainstorming session with the entire class, list as many types and sources of energy as you can. Examples include U.S. offshore oil, oil imported from other countries, local wind power, electricity from water sources (turbines at dams), geothermal energy, electricity from nuclear power, etc. You may want to start by listing the types of power (such as electricity), then the sources for each (such as nuclear, water, etc.).

In the next 2 minutes, class members should organize into groups of four students, based on a type of energy identified. For example, one group might be the windpower group. Another group might be the biomass energy group.

For homework, research the sources and availability of your energy type. Take windpower, for example. Where are the best locations to place windmills? To

use energy from windmills, what is the maximum distance a school can be located from the windmills? Write up one-half page to turn in for the assessment.

When you have had enough time to do your independent research, your teacher will take one class period to do the following:

10 minutes:

In your energy groups, you will compare and discuss your homework findings. In particular, you and other members of your group will discuss the sources available for your type of energy. You will evaluate how reliable the various sources of energy are for your school. On a scale of 1 to 4, your group and the other groups will assign a number to each energy source. If a source is very reliable for your school, assign the source a 1. Assign a 4 to sources that are not reliable. Consider such things as price and how much control the school would have over getting the energy, as well as whether the source is readily available.

Here is the scale:

1	2	3	4
Very reliable source	Somewhat reliable	Not very reliable	Not reliable source

In your group, identify reasons for your assessment. For example, if biomass energy is rated as a very reliable source of energy, there should be a reliable source of either crop-based or forest-based energy nearby.

10 minutes:

Choose one student from your group to report your findings to the class. As a class, identify the three most reliable sources of energy for your school. A student volunteer

will write these on the whiteboard or blackboard.

10 minutes:

Now repeat the groups' exercise, projecting 10 years into the future. Based on what you know now, what do you think will be the most reliable source of energy in 10 years for your school? Why? What might the community need to do to develop that source of energy? Appoint a different spokesperson from your group to share the results of this second discussion.

10 minutes:

Hold a class discussion to identify which three energy sources are predicted to be the most reliable in 10 years. A student volunteer will write these on the whiteboard or blackboard.

10 minutes:

Hold a class discussion about what the community might do to achieve success in having a reliable source of energy in 10 years. Identify any actions you can take today to help achieve this goal.

If you have time, your class may implement some of the actions identified in the class discussion.

FACTivity Extension



If you have access to the Internet in your classroom, visit <http://www.naturalinquirer.org>, Educator Resources, Lesson Plans, for an additional lesson plan. This lesson plan allows your students to play the role of a community deciding whether to heat its schools with wood chips.

Additional Information For Your Classroom

The title of this article, "A Chip Off the Old Block," is a phrase that dates to 1621. The block to which the phrase originally referred probably would have been wood or stone. The phrase refers to a person or a thing that comes from the same thing or parentage, and implies its similarity (<http://www.phrases.org.uk/>).

Additional Web Resources

The Fuels for Schools Program: <http://www.fuelsforschools.info/>.



If you are a Project Learning Tree-trained educator, you may use Activity # 86: "Our Changing World"; and #14: Renewable or Not?"