

Inquiry Question

How much energy does the average student consume on a given day? In what forms? Where do we get our energy from? How can we reduce our energy needs?

Name: _____

Date: _____

What is energy? Where does it come from? How do we use energy on a day to day basis?

Students will identify all of the ways that they use energy in their homes, at school, driving, eating, watching a movie, etc. They will then attempt to trace these activities back to the original energy source by researching where the energy comes from in the first place. Is the energy from coal? a hydro-electric dam? oil? gas? directly from the sun? etc.



General Instructions

In this experiment, you will examine the different forms and uses of energy in your life

Materials you'll need:

- Your course notes
- The internet
- Magazines, books, etc

Procedure

1. List all the ways you use energy directly in your life. Be as comprehensive as possible and include anything that consumes or requires energy (i.e. turning on the TV, iPods, solar calculators, heat, etc.)
2. Group your list according to the SOURCE of energy used (i.e. TV is ELECTRICITY, calculator might be SOLAR, batteries might be CHEMICAL, etc)
3. Try and trace back all of your energy sources listed above to their original sources (i.e. ELECTRICITY might be provided by a hydro-electric dam, gas may come from the gas station, but where does this come from?)
4. Your chart might look as follows:

Lawnmower ← gas ← gas station ← ?

5. It is your task to identify all of the question marks (?) on your charts.
6. Finally, organize your charts into RENEWABLE and NON-RENEWABLE energy sources.

By answering the simple question 'how do we use electricity' this project helps us understand our own electricity use.



Project submission:

- Upload your completed work to the Physics project drop box.

Project Timing:

- In its most basic form, this project will take the average student 2 hours. The research required may vary.

Extension Suggestions and Questions:

1. Compare your renewable energy consumption to your non-renewable. Comment on where most of your energy comes from.
2. Suggest possible ways to reduce your energy consumption.
3. Suggest possible ways to change some of your non-renewable energy consumption so that is more efficient or renewable