

Watts Up?

Fourth Grade

Activity: 6

Time: 1 Class Period

General Description

Students will discover that personal lifestyle can impact the amount of energy used. Students will discuss how their families could reduce energy usage. Students will then put into place a plan for their family to reduce the use of electricity.

Objective

Students will evaluate their own use of energy and develop a plan to reduce energy consumption.

Arizona State Standards

SC04 S1C2 PO5 Record data in an organized and appropriate format (e.g., t-chart, table, list, written log)

SC04 S1C3 PO1 Analyze data obtained in a scientific investigation to identify trends

SC04 S1C4 PO1 Communicate verbally or in writing the results of an inquiry

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SC04 S1C4 PO3 Communicate with other groups or individuals to compare the results of a common investigation

SC04 S4C3 PO4 Describe ways in which resources can be conserved (e.g., by reducing, reusing, recycling, finding substitutes)

W04 S1C1 PO1 Generate ideas through a variety of activities (e.g. brainstorming, graphic organizers, drawing, writer's notebook, group discussion, printed material)

W04 S1C1 PO5 Maintain a record (e.g. lists, pictures, journal, folder, notebook) of writing ideas

W04 S3C2 PO1 Record information (e.g. observation, notes, lists, charts, map labels, and legends) related to the topic

W04 S3C4 PO1 Write persuasive text (e.g. advertisements, paragraph) that attempts to influence the reader

M04 S2C1 PO3 Interpret graphical representations and data displays including single-bar/circle graphs, two-set Venn diagrams, and line graphs that display continuous data.

LS E1 Prepare and deliver an organized speech and effectively convey the message through verbal and nonverbal communications with a specific audience

LS E2 Prepare and deliver an oral report in a content area and effectively convey the information through verbal and nonverbal communications with a specific audience

Teacher Background

Helping students understand that their actions and behaviors can make them more aware that they have control over certain aspects of their lives.

Materials

Paper

Colored pencils/crayons

Large stapler or book binder

Activity Cards 4-6a and 4-6b

Procedure/Exploration

1. Brainstorm with students jobs that they do at home or that someone who they live with do. Brainstorm ways to do a list the jobs using less energy.
2. Tell students to think about wise or wasteful energy usage at home.
For example:
 - Are the lights and TV left on when no one was in the room?
 - Do you know what you want before you open the refrigerator door or do you stand there with the door open?
 - Do you take a bath or a shower?
 - Are the outside doors shut tightly?
 - Brainstorm other activities.
3. Students will select one family member to observe and record energy usage for one half hour daily for a week. Students will be using this information to help their family develop a plan to conserve energy.
4. Students will make a book, showing alternative ways of doing things to conserve energy. Each student folds pieces of paper in half and writes “Energy User” at the top of some and “Energy Wiser” at the top of the others.
5. Have the student bind their books, present their findings to the class, and share the book with their families.

What's Up?

Fourth Grade
Activity: 6
Activity Card: 4-6a

Student's Name: _____

Date: _____

Choose a family member to observe for one half hour daily for a week. Record energy use.

Person observed: _____

Day: _____

Time: _____

Energy use: _____ Comments: _____

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For example:

Person observed: my brother, Don

Day: September 10, 1996

Time: 4:00-4:30 p.m.

Energy use:

1. Stood holding the refrigerator door open for two minutes while trying to decide what to eat.

2. Came home and shut the door tightly.

Comments:

Took too much time.

Unnecessary loss of energy.

No excessive heat loss.

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	x
x	

Using Energy

Fourth Grade
Activity: 6
Activity Card: 4-6b

Student's Name:

Date:

The list below contains things that use energy to do a job for us. Can you think of a way the job might be done with less energy?

color television set

dishwasher

small load of laundry in washing machine

automobile

air conditioner

heated water bed

hot bath

thermostat at 70° in the winter

electric can opener

electric toothbrush

incandescent lights

electric calculator

electric razor

automatic garage door opener

boiling pan of water

computer

swimming pool

X-box

cooling the house

heating the house

windows

cooking

heating a pool