

# Lights On!

**Fourth Grade**

**Activity: 2**

**Time: 2 Class Periods**

## General Description

Students will survey their homes to chart usage of lights in each room. Students will determine where, when, and what kind of lights are being used.

## Objectives

Students will collect data pertaining to the use of lights in their homes.

Students will analyze the use of lights in their homes.

## Arizona State Standards

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

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 graphs, 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

LS E3 Interpret and respond to questions and evaluate responses both as interviewer and interviewee

LS E4 Predict, clarify, analyze and critique a speaker's information and point of view

## Teacher Background

Lights consume about 20% of all energy used in the United States. Saving energy helps ensure that we all have enough energy to meet our needs. Saving energy can help reduce the effects that producing energy may have on our environment. Saving energy can mean saving money. How are we using lights at home?

## **Materials**

Lights On! Home Survey form, Activity Card 4- 2

Chart paper

Markers

Graph paper

## **Procedure/Exploration**

1. Have the students brainstorm items containing light bulbs of any kind. (Remember toaster oven, refrigerator, sewing machine, etc.)
2. Model how to draw a map of a house, numbering the rooms.
3. Provide the students with time to draw maps of own homes and predict where the lights are and what kind of lights they are.
4. Students review Lights On! Home Survey chart, Activity Card 4-2, which will be completed at home.
5. Discuss results of home lights surveys. In what room were lights left on most frequently? What is the total number of hours that lights were left on in vacant rooms? Graph class results.
6. Brainstorm as a class how this number can be reduced?
7. Ask the students "How many lights did you observe in your home?" Graph class results.
8. Ask the student, how many lights were incandescent and how many were fluorescent?" Graph class results.
9. Ask the students, "How can you use what you have learned to save energy?"
10. Ask the students, "Did you observe any other things using energy in your home?"

# Lights On! Home Survey

Fourth Grade  
Activity: 2  
Activity Card: 4-2

Student's Name: \_\_\_\_\_

Date: \_\_\_\_\_

Draw a map of your home on the back of this paper. Remember to show directions, and to number the rooms. Think about where lights may be located. At home, draw the lights on your map as you observe them. Label the lights "I" for incandescent and "F" for fluorescent. Assign each room in your house a number. Check the rooms every 15 minutes. Put the times you check on the blank lines and put an X in the box if lights are left on in a VACANT room.

Time	Room #1	Room #2	Room #3	Room #4	Room #5	Room #6

Parent Signature: \_\_\_\_\_

