

# What's on When?

**Fourth Grade**

**Activity: 1**

**Time: 2 Class Periods**

## General Description

Students will perform an audit of when electricity is used in their home, combine their data with the class and make an analysis of key usage times. This activity gives students the opportunity to graph real life data.

## Objectives

Students will be made aware of the amount of energy used at different times in their homes and discuss how that use could impact limited resources.

Students will plan how they could reduce their family's electrical use and share it with the class.

## Arizona State Standards

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

SC04 S1C4 PO2 Choose an appropriate graphic representation for collected data:

- bar graph
- line graph
- Venn diagram
- model

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

SC04 S3C2 PO3 Design and construct a technological solution to a common problem or need using common materials

SC04 S4C3 PO1 Describe ways various resources (e.g., air, water, plants, animals, soil) are utilized to meet the needs of a population

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

### **Teacher Information**

Students in the 21<sup>st</sup> century will face an ever changing world that demands more and more energy to grow economically. Some day it will be their job to find solutions for our energy needs.

Helping students recognize what limited resources are and how the students can help conserve those resources is the key to a successful future.

### **Materials**

Graph paper

Science notebooks

Poster paper/large construction paper

Chart to keep track of data

Activity Card 4-1

### **Procedures/Exploration**

1. Have students brainstorm all the things in their house that uses electricity.
2. Explain to students that things like the air conditioner, pool pump, dryer, (not washers) and stove all use more electricity than things like lights and computers.
3. For the purposes of this activity students will focus only on outlets.
4. Have the students count how many outlets they have in their house. Remind them to count those outside, in the garage, and to check behind furniture.  
**\*\*\*Warn students not to stick anything into those outlets\*\*\***
5. When the students return to school have them multiply the outlets by two.
6. Give the students the Activity Card #4-1, keeping track of what outlets are providing electricity in a given time period, allow them a week to fill in the data.
7. Have each student graph their own data.
8. Graph the class usage.

In groups, have the students discuss how they could reduce the amount of electricity they use at house. Have each group propose a plan that will help their families save energy. Students will present their proposal through the creation of a poster.

# What's on When?

**Fourth Grade  
Activity: 1  
Activity Card 4-1**

**Student's Name:**

**Date:**

## Electricity Use Data Table

Day	Date	Time	Number of outlets in use
Week day		6:00am- 7:00 am	
Week day		6:00am- 7:00 am	
Week day		6:00pm- 7:00 pm	
Week day		6:00pm- 7:00 pm	
Week day		6:00pm- 7:00 pm	
Weekend day		11:00am- 12:00 pm	
Weekend day		3:00 pm- 4:00 pm	