

# Help the Planet, Save Energy!

## A Lesson About Light Bulbs



### Objectives:

- Students will learn about the different types of light bulbs
- Students will learn about the different energy uses in light bulbs

Saving energy will not only help the environment, it can also save money! Over the last few decades, new light bulbs have been designed to help make our homes more energy efficient. In this lesson students will learn about these light bulbs and how they can save money and energy in their homes.

### Materials:

- Student worksheets
- Writing materials
- LED light bulb
- Energy Survey (also available online)

### Lesson:

1. What are the three main types of household light bulbs?
  - Traditional Incandescent
  - CFL (Compact Fluorescent Lamps) - Fluorescent light bulbs designed to replace incandescent bulbs, often looking like a spiral bulb.
  - LED (Light Emitting Diodes) - More expensive light bulb that will last much longer
2. Discuss with the students the “Light Bulb Cost and Energy Usage” Chart.
  - This chart will help answer the questions on the worksheet.
  - Introduce kilowatt hour, a unit used to measure energy. Your house is billed by the electric company based on the number of kilowatt hours used in a month.
3. Discuss with students how to estimate the cost per hour to use each bulb.
4. Discuss the difference between the average number of hours each type of light bulb will burn.
5. Have students complete the worksheet.

### Homework Assignment:

1. Have students complete the worksheet, including counting the number of each type of light bulbs in their house.
2. List some ways you save money on light bulbs and electricity your home.
3. Have the students complete the home energy survey and encourage their family to install the light bulb.

### Follow up questions:

1. Which light bulbs are the most energy efficient? (LED bulbs)
2. Over time, which light bulbs would be most cost effective? (LED bulbs - Even though they are the most expensive, they last the longest and use the least amount of energy.)

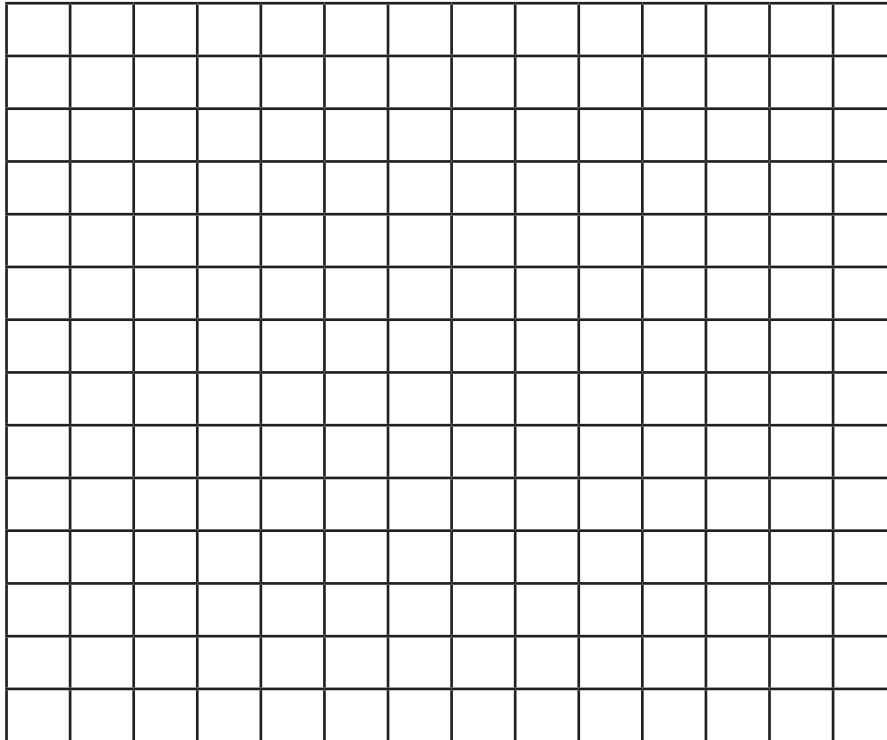
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## Light Bulb Cost and Energy Usage

	Average Cost per Bulb	Energy Used kWh (kilowatt hour)	Life in Hours
Traditional Incandescent	\$0.41	60	1000
CFL (Compact Fluorescent Lamps)	\$2.24	14	10,000
LED (Light Emitting Diodes)	\$9.97	9	25,000

1. Using the data above, make a bar graph of the energy used.



2. How many more kilowatt hours does a incandescent bulb use than an LED blub? \_\_\_\_\_

3. Which light bulb costs the most? \_\_\_\_\_

4. Which light bulb has the longest life? \_\_\_\_\_

5. Complete the chart below.

	Traditional Incandescent	CFL (Compact Fluorescent Lamps)	LED (Light Emitting Diodes)
How many light bulbs do you have in your house?			

6. On the back of this paper, list some ways you can save money on light bulbs and electricity your home.