

# Energy

**Grades 4-6**

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**Illustrated by S&S Learning Materials**

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Eleanor M. Summers is a retired teacher who continues to be involved at various levels of education. She loves to write educational materials to provide tools for teaching and learning.

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# Table of Contents

At A Glance™ .....	2
Teacher Rubric .....	4
Student Rubric .....	5
Introduction .....	6

## Activities and Experiments

### Light and Sound Energy

Teacher Notes .....	7
Materials List .....	8
Pre-assessment Quiz.....	9
Student Activities and Experiments .....	10
What Have You Learned ? .....	46

### Conservation of Energy

Teacher Notes .....	47
Materials List .....	48
Pre-assessment Quiz.....	49
Student Activities and Experiments .....	50
What Have You Learned ? .....	63

### Electrical Energy

Teacher Notes .....	64
Materials List .....	65
Pre-assessment Quiz.....	66
Student Activities and Experiments .....	67
What Have You Learned ? .....	85

<b>Answer Key</b> .....	86
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Name: \_\_\_\_\_

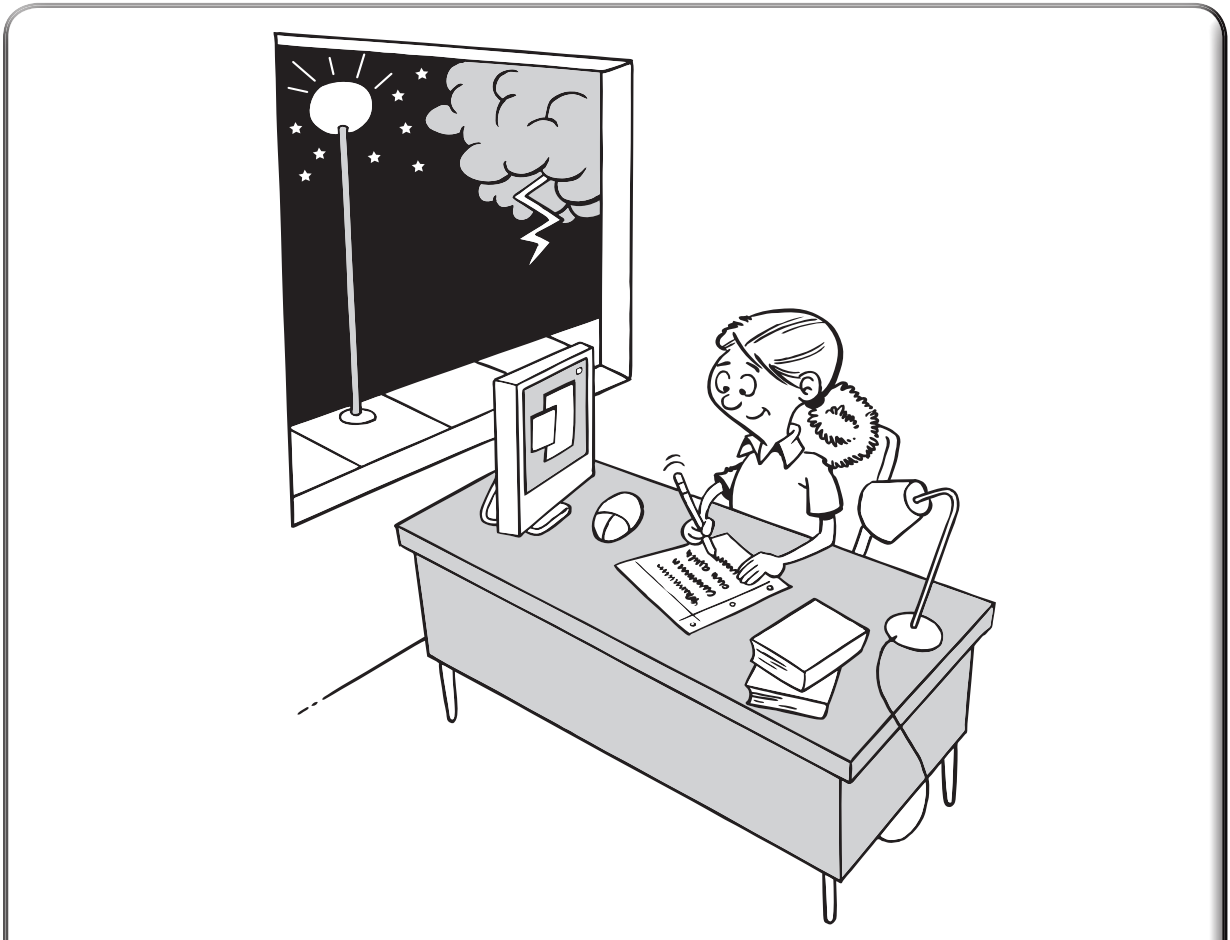
# Natural and Artificial Light

## Activity 2

Without light from our Sun, the Earth would be cold, dark and lifeless. Light is a valuable kind of energy for all living things.

**artificial light**      **natural light**

- A. In everyday life, we get light from many different sources. Light that occurs in nature is called \_\_\_\_\_. Light that does not occur naturally is called \_\_\_\_\_. This type of light is created by people.
- B. Look carefully at the picture. Circle all the sources of light that you see. Then write the names of the light sources under the correct heading.



Artificial Light Source	Natural Light Source



Name: \_\_\_\_\_

# Natural and Artificial Light

## Activity 2

C. Think about other sources of natural and artificial light around us. Give three more examples of each source. Write different ideas than those in the picture.






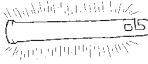

Artificial Light Source	Natural Light Source

D. Light is very closely related to heat. Often things that make light give off heat. Often things that are very hot give off light.

Look at the pictures on the chart.

Identify the type of light source by putting a ✓ check mark under **Artificial Light** or **Natural Light**.

Then put a ✓ check mark under “gives off heat” or “produces no heat.”

		Artificial Light	Natural Light	Gives Off Heat	Produces No Heat
Glow worm					
Candle					
Light bulb					
Fireflies					
Sun					
Light stick					
Campfire					



# Be a Heat Detective!

Name: \_\_\_\_\_

## Activity 3

You may need an adult to help you with this activity.

Take a look around your house and find objects that emit light.

Test the objects to see if they are giving off heat as well as light.



You should hold your hands at least 2 inches (5 cm) away from the light in order to feel the heat.



Complete the chart by:

- a) naming the object
- b) telling whether or not it gives off heat as well as light.

Name of Object in My House	Gives off Light but no Heat	Gives off Light and Heat



Name: \_\_\_\_\_

# How Does Light Travel?

## Experiment I



- a flashlight with a strong beam
- plasticene or play dough
- 3 pieces of cardboard 7 in. x 7 in. (18 cm x 18 cm)
- a pencil
- a partner

In this experiment, you will work like a scientist. Scientists do experiments to confirm if their predictions are right. Even if your guess is wrong, you will have learned something new.

Write your ideas for these questions.

Question: How do you think light travels? \_\_\_\_\_

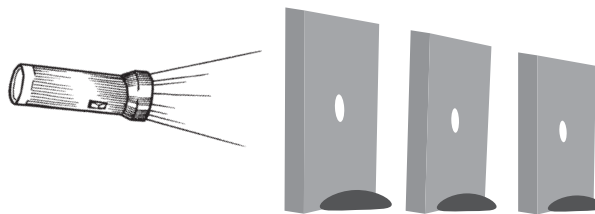
\_\_\_\_\_



What will happen when you shine a flashlight at the holes in three pieces of cardboard?

a) if the holes are in a line? \_\_\_\_\_

b) if the holes are not in a line? \_\_\_\_\_



1. Cut out three pieces of cardboard the same size: 7 in. x 7 in. (18 cm x 18 cm)
2. Measure to find the centre of each piece of cardboard. Mark the spot.
3. Use your pencil to make a hole in the centre of each piece.
4. Attach two pieces of play dough/plasticene on the bottom edges of each piece of cardboard. Stick on enough so that the piece of cardboard will stand up by itself.
5. Your partner will shine the flashlight towards the pieces of cardboard.