

Science 4

Microlearning Module

QUARTER 3 – Module 11

Sources and Uses of Light, Sound, and Heat Energy



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Microlearning Module (MLM)

Quarter 3: Module 11: Sources and Uses of Light, Sound, and Heat Energy First Edition, 2024

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MICROLEARNING MODULE

Name: _____ Grade & Sec: _____ Score: _____

Subject: Science 4 Quarter: 3 MLM No. 11

Teacher: _____

Learning Competency: **The learners observe and identify sources and uses of light, sound, and heat energy at school, at home and in the local community.**

Sources and Uses of Light, Sound, and Heat Energy

A. Look Back!

Directions: Read the following sentences. Choose the letter of the best answer and write it on a separate sheet of paper.

1. Where in a room would you find the warmest air during the winter?
A. by the window
B. in the corners
C. near the floor
D. near the ceiling
2. What would happen if you increased the intensity of a sound?
A. The sound would be higher.
B. The sound would get louder.
C. The sound would be lower.
D. The sound would get softer.
3. Why do you see your image in a mirror?
A. Light is absorbed.
B. Light is reflected.
C. Light is diffused
D. Light is refracted.
4. What happens to a sound as the vibrations of an object increase in strength?
A. The sound becomes softer.
B. The sound becomes louder.
C. The pitch of the sound is higher.
D. The sound waves get further apart.
5. Which activity is best for maintaining a cool temperature in a home during the summer?
A. open the refrigerator often
B. open the windows during the day
C. close the shades where the sun is shining
D. turn off the television, radios, and computers

B. What's New?

Let us know the sources and uses of light, sound, and heat energy by doing the following simple activities.

1.



1. Rub your hands together, what did you feel when you do it?

2.



2. Walk in a very dark room. Can you easily move and see the things around you even if it is dark?

3.



3. Close your eyes and listen to the sounds around you. What can you hear?

C. What Is It?

Light is a form of energy also known as radiant energy. It enters our eyes to let us see the things around us. There are two sources of light. It is natural sources and artificial sources.

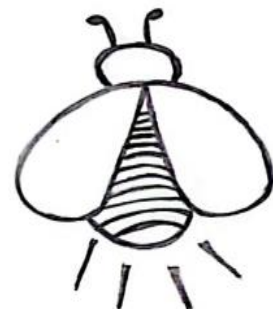
The **natural source of light** comes from the things like the sun. The Sun is a natural source of light. It is the primary source of light. Other examples of it are fire, stars, and fireflies.



Fire



Star



Firefly

The **artificial source of light** comes from man-made objects such as candles, flashlights, and light bulbs. It can be operated using batteries or electricity.



Candle



Flashlight



Light bulb

The **light** from the sun helps the plant to make its food. Humans use light in various ways. It is used in the house to give light around. Light is also used to benefit things like cameras, televisions, computers, and cell phones.

Sound is a type of energy made by vibrations. People, animals, and things make different sounds. There are sounds that are pleasant and unpleasant to hear. We can produce sounds naturally and artificially.

Natural sound can be heard from living things like animals and plants, as well as the environment.

Examples:

1. raindrops
2. blowing wind
3. rustling of leaves
4. sounds from animals

Artificial or man-made sounds include sounds from musical instruments, airplanes, cars, televisions, and music players.



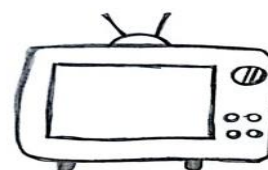
Musical



Airplane



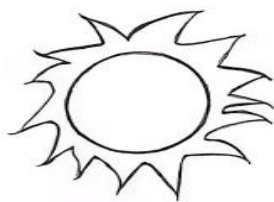
Car



Television

Sounds are useful because they allow communication with each other. It helps us understand the people around us and can also help cheer up a person. Sounds can also be used for medical purposes, like using ultrasound to check the baby in the mother's womb or to see the condition of the internal organs of a person.

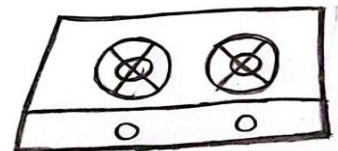
Heat can be felt when sunlight hits you. The sun is the main source of heat on Earth. The sun's heat keeps the Earth warm enough for living things to survive. Examples of other sources of heat:



Sun



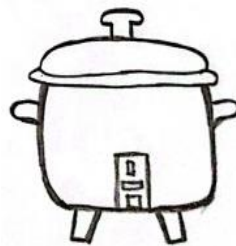
Fire



Gas stove



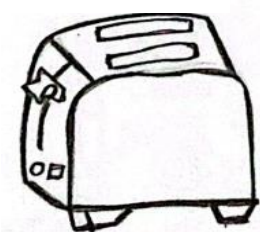
Griller



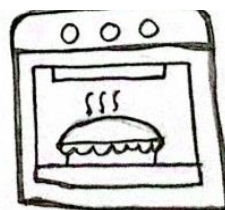
Rice cooker



Electric kettle



Toaster



Oven



Coffee maker

Burning objects emit heat and also appliances in your home. It can help us cook food, give us warmth during cold days, and dry up our clothes.

D. Let's try!

Activity D.1: Concept Web: Light, Sound, and Heat

Directions: Complete the concept web by listing three examples of sources and uses of: light, sound, and heat energy. Write your answers on a separate sheet of paper.

1.	<div>Sources 1. 2. 3.</div>	<div>Light</div>	<div>Uses 1. 2. 3.</div>
2.	<div>Sources 1. 2. 3.</div>	<div>Sound</div>	<div>Uses 1. 2. 3.</div>
3.	<div>Sources 1. 2. 3.</div>	<div>Heat</div>	<div>Uses 1. 2. 3.</div>

Activity D.2: Write to express

Directions: Read and answer the following situations. Write your answer on a separate sheet of paper.

1. You want to drink hot chocolate. What sources of heat will you use?
2. You want to wake up early in the morning. What sources of sound will you use?
3. While you are reading and answering your module, what sources of light did you use?

E. Let's Evaluate

Directions: Choose the letter of the best answer and write it on a separate sheet of paper.

1. It is the main source of heat on Earth.
A. heat B. moon C. star D. sun
2. Which of the following originates from vibrating objects?
A. dance B. motion C. sing D. sound
3. You want to cook boiled eggs for your mother. What source of heat will be used to cook it?
A. candle B. gas stove C. matches D. sun
4. Light helps us see everything around us. Where does the light come from?
A. size C. beauty
B. color D. natural and artificial sources
5. Why do we need light if we are reading?
A. We can play happily. C. We can read clearly.
B. We can sleep soundly. D. none of the above
6. Why do animals and humans need light?
A. It is colourful. C. It helps to find food.
B. It can give happiness. D. It dries the clothes.
7. The following are positive uses of sound **EXCEPT**
A. It gives us a warning. C. It gives us information.
B. It helps us to feel relaxed. D. It gives us negative feelings.
8. What does it mean when you hear the sound of a fire truck?
A. There is a fire. C. A thief is caught.
B. There is a parade. D. There is a collision.
9. The following are uses of heat **EXCEPT**
A. sewing B. cooking C. drying D. boiling
10. Why is it necessary to lay wet clothes out in the sun?
A. To cool the clothes.
B. To straighten clothes.
C. To make them smell good.
D. To dry the clothes.

F. References

Forones, Queenie Love J. “Ikatlong Markahan – Modyul 6: Pinanggagalingan at Gamit Ng Init .” Edited by Alpha V Cerbo. Google drive: Sign-in, 2021.https://drive.google.com/drive/folders/1Q_KZLT1afsrOA8BbV6_muk5JhkaF2M2d?usp=drive_link.

Nierra, Leziel S. “Ikatlong Markahan – Modyul 5: Mga Gamit Ng Tunog at Ang Pinagmumulan Nito.” Edited by Alpha V Cerbo. Google drive: Sign-in, 2020.
https://drive.google.com/drive/folders/1Q_KZLT1afsrOA8BbV6_muk5JhkaF2M2d?usp=drive_link.

Combair, Aldemer Quiel D. “Ikatlong Markahan – Modyul 4: Mga Pinanggagalingan at Gamit Ng Liwanag.” Edited by Alpha V Cerbo and Blessy Mae M Cabayao. Google drive: Sign-in, 2021.
https://drive.google.com/drive/folders/1Q_KZLT1afsrOA8BbV6_muk5JhkaF2M2d?usp=drive_link.

Janelle. “[Teacher Vibal] Science Fridays: Light, Sound, and Heat.” YouTube, January 15, 2021.
https://youtu.be/NOT2deJ7GOE?si=IMlkgC_Ui961q3Xl.

ANSWER KEY

Grade 4 SCIENCE

Quarter: 3

LC No. 11

A. Look Back

1. D
2. B
3. B
4. B
5. B

B. What's New!

1. I feel warmth. (Answer may vary)
2. No, because I can't see anything when it is dark.(Answer may vary)
3. I hear music, animal sounds, rain drops or anything that has sounds.
(Answer may vary)

C. Let's Try!**Activity 1: "Concept Web: Light, Sound, and Heat"**

1. Light

Sources: sun, light bulbs, firefly, candle, fire, and star**Uses:** Helps plant to make its food., To make our rooms bright.

To see the content of what we are reading.,

To see anything around us.

It is used to benefit things like cameras, TV, computers, and cell phones. (Answer may vary)

2. Sound

Sources: sound from animals, rustling of leaves, blowing wind, raindrops, musical instruments, airplanes, car, televisions, and music players.**Uses:** It allows communication.

It helps us understand people around us.

Helps cheer up a person.

It can be used for medical purposes.

Helps us to feel relax. (Answer may vary)

3. Heat

Sources: sun, griller, fire, gas stove, rice cooker, toaster, oven, coffee maker, and electric kettle.**Uses:** Helps us cook food.

Used to dry clothes.

Keep us feel warmth when we are cold.

Used to boil water.

Used to straighten our clothes. (Answer may vary)

Activity 2: "Tell Me?"

1. Fire and kettle, electric kettle, and gas stove
2. Alarm clock
3. Light bulb, candle, sun or other sources of light.

E. Let's Evaluate!

1. D 6. C
2. D 7. D
3. B 8. A
4. D 9. A
5. C 10. D

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