

Science

Quarter 1 - Module 2: Effects of Decaying Materials on One's Health and Safety



Science – Grade 4

Alternative Delivery Mode

Quarter 1 - Module 2: Effects of Decaying Materials on One's Health and Safety

First Edition, 2020

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Science

Quarter 1 - Module 2:

Effects of Decaying Materials on One's Health and Safety

This instructional material was collaboratively developed and reviewed by educators from public schools. We encourage teachers and other education stakeholders to email their feedback, comments, and recommendations to the Department of Education at region10@deped.gov.ph.

We value your feedback and recommendations.

What This Module is About

Do you ask yourself questions about the world you live in? Do you even wonder what lies ahead the blue horizon or what rests beyond the seas? Your young mind may have many questions because you are so curious about how things happened.

This module will help you discover the answers to the questions you have about yourself, the environment, and everything beyond it. This will be your guide as you unlock new knowledge through various learning experiences through science process skills such as investigating/experimenting, observing, describing, tabulating/organizing data, analyzing, interpreting, explaining, generalizing, synthesizing, and communicating results.

Notes to the Teacher



Dear Teacher,

This is a self-paced module which has various activities to be done by the learners at home. Clear and careful instructions must be given to the learners to ensure safety and avoid misconceptions in performing the activities.



What I Need to Know

Garbage around us may have harmful effects to one's health and safety if they are not disposed properly. When not properly disposed, some decaying materials can lead to some diseases that prevent our body and mind from working normally.

In this module, you will learn about different sickness/ diseases caused by decaying materials and the effects of decaying materials to one's health and safety.

Learning Objectives:

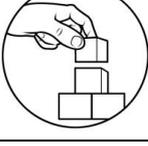
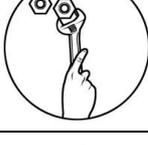
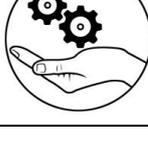
1. Identify the diseases/sickness that may result from exposure to decaying materials.
2. Identify the effects of decaying materials on one's safety.

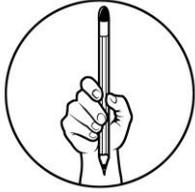
How to Learn from this Module

For you to achieve the objectives cited above, you are to do the following:

- Take your time reading the lessons carefully.
- Follow the directions and/or instructions in the activities and exercises diligently.
- Answer all the given tests and exercises.

Icons of this Module

	What I Need to Know	This part contains learning objectives that are set for you to learn as you go along the module.
	What I Know	This is an assessment as to your level of knowledge to the subject matter at hand, meant specifically to gauge prior related knowledge.
	What's In	This part connects previous lessons with that of what you are going to learn.
	What's New	An introduction of the new lesson through various activities, before it will be presented to you.
	What is It	These are discussions of the activities as a way to deepen your discovery and understanding of the concept.
	What's More	These are follow-up activities that are intended for you to practice further in order to master the competencies.
	What I Have Learned	Activities designed to process what you have learned from the lesson
	What I Can Do	These are tasks designed to showcase your skills and knowledge gained, and applied into real-life concerns and situations.
	Post Assessment	This assessment evaluates your level of mastery in achieving the learning objectives.
	More Activities	These are additional activities designed to increase the level of your skills and knowledge.



What I Know

Test A

1. This is a water-borne disease that we often get by drinking polluted water and uncovered foods.
A. malaria B. scabies C. typhoid D. leukemia
2. Lino suffered from severe diarrhea. He was rushed to the hospital. The doctor said he suffered from dehydration and should be treated immediately. What would be the possible illness?
A. dysentery B. dengue fever C. typhoid D. malaria
3. Why did Maria experience itchiness in her skin after swimming in the river?
A. The river might be dirty and contaminated
B. She had eaten something that caused allergy.
C. She swam in the river wearing dirty clothes.
D. Maria is allergic to the water of the river.
4. Leah lives near the dumpsite. She and her friends always play outside near piles of garbage. One early morning, she happens to spit blood and complains of chest and back pains. What might be her possible illness?
A. tuberculosis B. dengue fever C. malaria D. covid-19
5. Leo has a high fever. Her mother found out some bruises in his skin. What will be the doctor's possible diagnosis?
A. dengue fever B. diarrhea C. dysentery D. covid-19

Lesson 1

What Diseases Will I Get From Decaying Materials?

Disease is an illness that affects a person, an animal, or a plant. It is a condition that prevents the body or mind from working normally.

This lesson will help you identify the diseases caused by exposure to decaying materials.



What's In

Name Game!



Figure 1.1. Garbage Area

Can you name the materials that undergo decay? Enumerate three materials from the drawing above that undergo decay.



What's New

Let's Do It!

Directions:

- A. Examine the drawings provided below.
- B. Identify the condition shown in each drawing.
- C. Write in your activity sheet the identified conditions shown.
- D. Organize your findings in the table provided below.
- E. Follow how it is done in the example given in the first line.



Figure 1. Drawing of a dumpsite



Figure 2. Drawing of a squatter's area

Activity Sheet

Place where the family lives	Waste materials seen in the surroundings	Pest breeding in the surroundings	Possible illness/diseases resulting from exposure to decaying materials
example: canals	empty cans, plastic bottles trashes rotten fruits and vegetables	mosquito flies	allergy dengue malaria typhoid waterborne disease
1.dumpsite			
2.squatters area			

Guide Questions:

1. What are the possible waste materials found in these areas?
 - a. Dumpsite
 - b. Squatters' Area

2. What possible illness /sickness brought by these pests to the dwellers n this place? Why?

3. How could these sicknesses be prevented?



What is It

Learning Circuit!

- **Diseases** - illnesses that affect a person, animal, or plant; it is a condition that prevents the body or mind from working normally.
- Decaying materials cause harm to one's health. Some diseases caused by decaying materials are: allergy, cholera, malaria, typhoid, dysentery and skin diseases.
 - **Malaria and dengue fever** - are diseases spread by specific type of mosquitoes. These become epidemic in places where these type of mosquito breed.
 - **Typhoid** – is a waterborne disease. People who drink polluted water can become infected with typhoid. The garbage in this area is a good breeding place for flies. The flies can carry the disease and infect more people
 - **Dysentery** – is a disease that can cause severe diarrhea. If not treated properly someone can die from it.

A water borne disease that is transmitted to a person when they drink polluted water.

- Diseases can be prevented if there is proper disposal of wastes especially for those living in crowded areas and those who live near dumpsites, esteros, or canals.
- Good hygiene practices such as washing of hands, boiling of water, avoidance or exposure to air help being exposed to diseases.



What's More

Match Me!

Directions: Match the disease to its description. Write your answer in your science notebook.

Diseases

- ___ 1. Dysentery
- ___ 2. Ring worm
- ___ 3. Malaria
- ___ 4. Typhoid
- ___ 5. Allergy

Description

- A. waterborne disease
- B. it causes severe diarrhea
- C. parasitic worm
- D. transmitted by mosquitoes
- E. itchiness



What I Have Learned

Brain Twisting!

Directions: Write **true** if the statement is correct. If false, replace the underlined word with the correct word or phrase.

- ___ 1. Cholera is an infectious disease that causes severe watery diarrhea, which can lead to dehydration and even death if untreated.
- ___ 2. Dysentery is transmitted when a person drinks dirty water.
- ___ 3. Scabies is a skin infestation caused by a mite
- ___ 4. Mosquitoes cause dengue and typhoid.
- ___ 5. Washing hands before and after eating may help prevent diseases



What I Can Do

Guessing Time!

Directions: Manghuhula ka ba? Write what will happen to you if you are in this situation.

Situation	Hula Mo
If we are exposed to decaying materials, what will happen if we fail to wash our hands before eating?	



Answer Key

QUARTER 1- MODULE 2

Lesson 1

What Diseases Will I Get From Decaying Materials?

What I know
1. C
2. A
3. A
4. A
5. A
6. DENGUE
7. SCABIES
8. TYPHOID
9. MALARIA
10. CHOLERA
11. D
12. B
13. D
14. D
15. D

What I Have Learned
1. true
2. true
3. true
4. malaria
5. true

What's More
1. B
2. C
3. D
4. A
5. E

Possible illness/diseases resulting from exposure to decaying materials	Pest breeding in the surroundings	Cockroach Mosquito Flies Malaria Typhoid Waterborne disease	Rotten fruits and vegetables Trashes Dead animals Empty bottles and cans, etc. plastics	dumpsite
				Squatters area
1. A. cellophanes, plastics, rotten vegetables and fruits, cans, etc. B. cellophanes, plastics, rotten vegetables and fruits, cans, etc. 2. allergies, malaria, dengue, typhoid, diarrhea 3. clean the area, dispose waste properly, practice proper hygiene.				

What's In (answers may Vary)
1. boxes
2. fruits
3. vegetables

What I can Do	Situation
I may get sick	If we are exposed to decaying materials, what will happen if we fail to wash our hands before eating?

Lesson 2

Effects of Decaying Materials on One's Safety

Waste materials when not disposed properly will have a harmful effects to our health and safety. People living near garbage areas, dumpsites and in squatter areas are most exposed to sickness and diseases.

This module will help you identify the effects of decaying materials on one's safety.



What's In

Find Me!

Directions: Find and encircle the different waste materials found in a community.

Clue: There are 10 words all in their plural form. Refer to the words given below.

P	A	N	S	T	Y	R	O	F	O	A	M	C	S
E	A	R	O	A	W	H	S	T	F	A	G	A	E
E	R	P	R	H	O	I	R	U	N	S	H	N	E
L	Y	R	E	F	O	J	Q	U	E	I	J	S	D
I	N	D	I	R	D	K	R	S	E	K	L	T	S
N	O	R	M	A	S	L	S	V	D	M	N	O	B
G	I	N	G	H	G	A	P	W	C	O	P	B	A
S	E	A	T	G	L	M	S	X	B	Q	O	U	Z
R	S	O	W	G	E	N	N	Y	A	X	T	V	Y
K	L	A	B	C	D	O	A	M	E	T	A	L	S
C	P	L	A	S	T	I	C	S	Z	R	S	W	X

STYRO FOAMS

METALS

PEELINGS

WOODS

PLASTICS

PANS

PAPERS

GLASSES

CANS

SEEDS



What's New

Fill Me Up!

Directions: Fill out the table. Write answers in your Answer Sheet.

Decaying Materials	Ways of Disposing Decaying Materials	Possible effects on the health of the family members
 Food left overs		
 Dead fishes		
 Dumpsite		



What is It

Read and Learn More

- **Pollution** - an action or process of making land, water, air dirty and not safe to use.
- **Compost** - waste materials that are recycled as fertilizer
- Exposure to decaying materials will make people sick.

- Waste materials that are made into compost are not harmful to one's health and safety.
- Making a compost is one way of disposing garbage properly. Waste materials that are made into compost are not harmful to one's health and safety.
- People who live on the riverside often throw their garbage into the river.
- Chemical waste from the factories pollute the rivers.
- Polluted water contains harmful bacteria and chemical wastes that can make people sick.

Study the drawings below. Write your answers to the guide questions in your Answer Sheet.

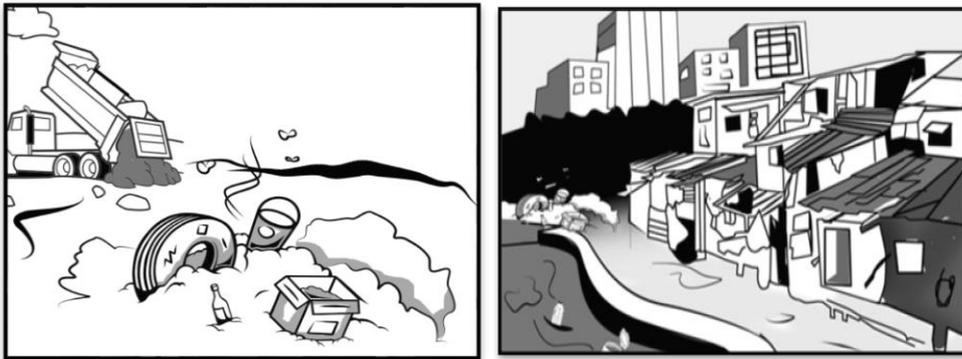


Figure 3. Drawings of a dumpsite and a squatter's area

Guide Questions:

1. Describe what do you think might happen to the people living near the dumpsite/ garbage area?
2. What is the effect of this in one's health and safety?



What's More

Brain Twisting!

Directions: Inside the box below are some common household materials. What kind of pollution will they cause when not disposed properly? Write them under the correct column.

Note: Answers can be repeated.

detergent	insecticides	oil
peelings of fruits	rugs	styrofoam
diapers	plastics	animal manure
dead animals	leftover foods	

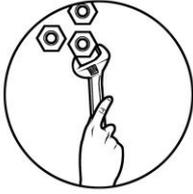
Air Pollution	Water Pollution	Land Pollution



What I Have Learned

Brain Buster!

Directions: Write a reflection on the effects brought about by the exposure to decaying materials in your environment to one's safety.



What I Can Do

It!

Answer briefly:

1. Name five (5) waste materials commonly found at home.
2. What do you think will happen to us if we are exposed to these kind of materials?
3. What you going to do with the decaying materials?



Answer Key

Lesson 2

Effects of Decaying Materials on One's Safety

X	W	S	R	Z	S	C	I	T	S	A	L	P	C
S	L	A	T	E	M	A	O	D	C	B	A	L	K
Y	V	T	X	A	Y	N	N	E	G	W	O	S	R
Z	U	O	Q	B	X	S	M	G	L	T	A	E	S
A	B	P	O	C	W	P	A	G	H	G	N	I	G
B	O	N	M	D	V	S	L	S	A	M	R	O	N
S	T	L	K	E	S	R	K	D	R	I	D	N	I
D	S	J	I	E	U	Q	J	O	F	E	R	Y	L
E	N	H	S	N	U	R	I	O	H	R	P	R	E
E	A	G	A	F	T	S	H	W	A	O	R	A	E
S	C	M	A	O	F	O	R	Y	T	S	A	N	P

What's In

1. a. cellophanes, plastics, rotten fruits and vegetables, cans, etc.
- b. cellophanes, plastics, rotten fruits and vegetables, cans, etc.
2. allergies, typhoid, malaria, dengue, diarrhea, etc.
3. clean the area, dispose waste properly, practice proper hygiene.

Possible effects on the health of the family members		Decaying Materials	Decayed fruits and vegetable	Dead fishes	Dump site
Sickness/ diseases		Ways of Disposing Decaying Materials	Compost pit	Compost pit	Garbage segregation
Sickness/ diseases					Sickness/ diseases

What's New

What is it	1. Get sick	2. Sickness/ diseases
------------	-------------	-----------------------

What's More		
Air Pollution	insecticides air pollution peelings of fruit animal pollution left overs	Detergent Oil Diapers plastic
Water Pollution		Oil Rug Diapers Styrofoam plastic
Land Pollution		

What I can Do	1. (answers may vary)	2. Make a compost to have organic fertilizer to be used in you plants.
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What I Have Learned	Exposure to decaying materials can lead to possible illnesses/sickness. It can be harmful to one's health and safety.
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Test B*For numbers 6-10***Directions:** Find and encircle at least five diseases inside the box.

D	Y	S	E	N	T	E	R	Y	W
C	A	D	E	N	G	U	E	T	D
B	H	X	M	P	D	L	R	Y	E
C	F	O	A	J	O	M	S	P	N
D	E	G	L	L	W	N	W	H	G
R	U	N	A	E	K	S	K	O	U
M	O	T	R	G	R	F	M	I	E
N	A	L	I	U	J	A	Y	D	P

Test C

11. This is a water borne disease that we often get by drinking polluted water and uncovered foods.
A. malaria B. scabies C. typhoid D. leukemia
12. Lino is suffering from severe diarrhea. He was rushed to the hospital. The doctor said he suffered from dehydration and should be treated immediately. What would be the possible illness?
A. dysentery B. dengue C. typhoid D. malaria
13. Why did Maria experience itchiness in her skin after swimming in the river?
A. The river might be dirty and contaminated
B. She had eaten something that caused allergy.
C. She swam in the river wearing dirty clothes.
D. Maria is allergic to the water of the river.
14. Leah lives near the dumpsite. She and her friends always play outside near piles of garbage. One early morning, she happens to spit blood and complains chest and back pains. What might be her possible illness?
A. tuberculosis B. dengue fever C. malaria D. covid 19
15. Leo has a high fever. Her mother found out some bruises in his skin. What will be the doctor's possible diagnosis?
A. dengue fever B. diarrhea C. dysentery D. covid 19



Additional Activities

Exercise 1

Directions: The scrambled words below are diseases one can get When exposed to decaying materials. Rearrange the following words and find out what they are.

1. **IMLAARA** - _____
2. **NGIR ORWM** - _____
3. **YGLLERA** - _____
4. **ODIHTYP** - _____
5. **HRREAIDA** - _____

Exercise 2

Directions: Identify the following whether they are decaying or non-decaying materials?

1. leftover food - _____
2. banana peelings - _____
3. kangkong leaves - _____
4. camote leaves - _____
5. twigs - _____
6. Weeds - _____
7. tetrapack juices - _____
8. glass bottles - _____
9. carton - _____
10. pieces of cloth - _____

Congratulations for working diligently with this module. Try to share your experience with your teacher or elder brother or sister at home.



Answer Key

<i>Post Assessment</i>
1.D
2. B
3.D
4.D
5.D
6.DENEGUE
7.SCARIES
8.TYPHOID
9. MALARIA
10. C
11.A
12.A
13.A
14.A
15.A

<i>Exercise 2</i>
1.decaying
2. decaying
3. decaying
4. decaying
5. decaying
6. decaying
7.non-decaying
8. non-decaying
9. decaying
10. decaying

ADDITIONAL ACTIVITIES
<i>Exercise 1</i>
1. Malaria
2. Ring Worm
3. Allergy
4. Typhoid
5. diarrhea

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Name: _____ Grade&Section: _____ Score: _____

QUARTER 1- MODULE 2	
Lesson 1	What Diseases Will I Get From Decaying Materials?

Answer Sheet

<i>What I Know</i>
1.
2.
3.
4.
5.
6.
7.
8.
9.
10.
11.
12.
13.
14.
15.

<i>What 's In (answers may Vary)</i>
1.
2.
3.

<i>What's New</i>			
Place where the family lives	Waste materials seen in the surroundings	Pest breeding in the surroundings	Possible illness/diseases resulting from exposure to decaying materials
dumpsite			
Squatters area			

1. A. _____
B. _____
2. _____
3. _____

<i>What 's More</i>
1.
2.
3.
4.
5.

<i>What I Have Learned</i>
1.
2.
3.
4.
5.

<i>What I can Do</i>	
Situation	Hula Mo
If we are exposed to decaying materials, what will happen if we fail to wash our hands before eating?	

Name: _____ Grade&Section: _____ Score: _____

Lesson 2

Effects of Decaying Materials on One's Safety

Answer Sheet

What's In													
P	A	N	S	T	Y	R	O	F	O	A	M	C	S
E	A	R	O	A	W	H	S	T	F	A	G	A	E
E	R	P	R	H	O	I	R	U	N	S	H	N	E
L	Y	R	E	F	O	J	Q	U	E	I	J	S	D
I	N	D	I	R	D	K	R	S	E	K	L	T	S
N	O	R	M	A	S	L	S	V	D	M	N	O	B
G	I	N	G	H	G	A	P	W	C	O	P	B	A
S	E	A	T	G	L	M	S	X	B	Q	O	U	Z
R	S	O	W	G	E	N	N	Y	A	X	T	V	Y
K	L	A	B	C	D	O	A	M	E	T	A	L	S
C	P	L	A	S	T	I	C	S	Z	R	S	W	X

What's New		
Decaying Materials	Ways of Disposing Decaying Materials	Possible effects on the health of the family members
Decayed fruits and vegetable		
Dead fishes		
Dump site		
1.a. _____		
b. _____		
2. _____		
3. _____		

What is It
1. Get sick
2. Sickness/ diseases

What's More		
Air Pollution	Water Pollution	Land Pollution

<i>What I can Do</i>
1.
2.

Name: _____ Grade&Section: _____ Score: _____

Answer Sheet

<i>Post Assessment</i>
1.
2.
3.
4.
5.
6.
7.
8.
9.
10.
11.
12.
13.
14.
15.

ADDITIONAL ACTIVITIES
<i>Exercise 1</i>
1.
2.
3.
4.
5.

<i>Exercise 2</i>
1.
2.
3.
4.
5.
6.
7.
8.
9.
10.