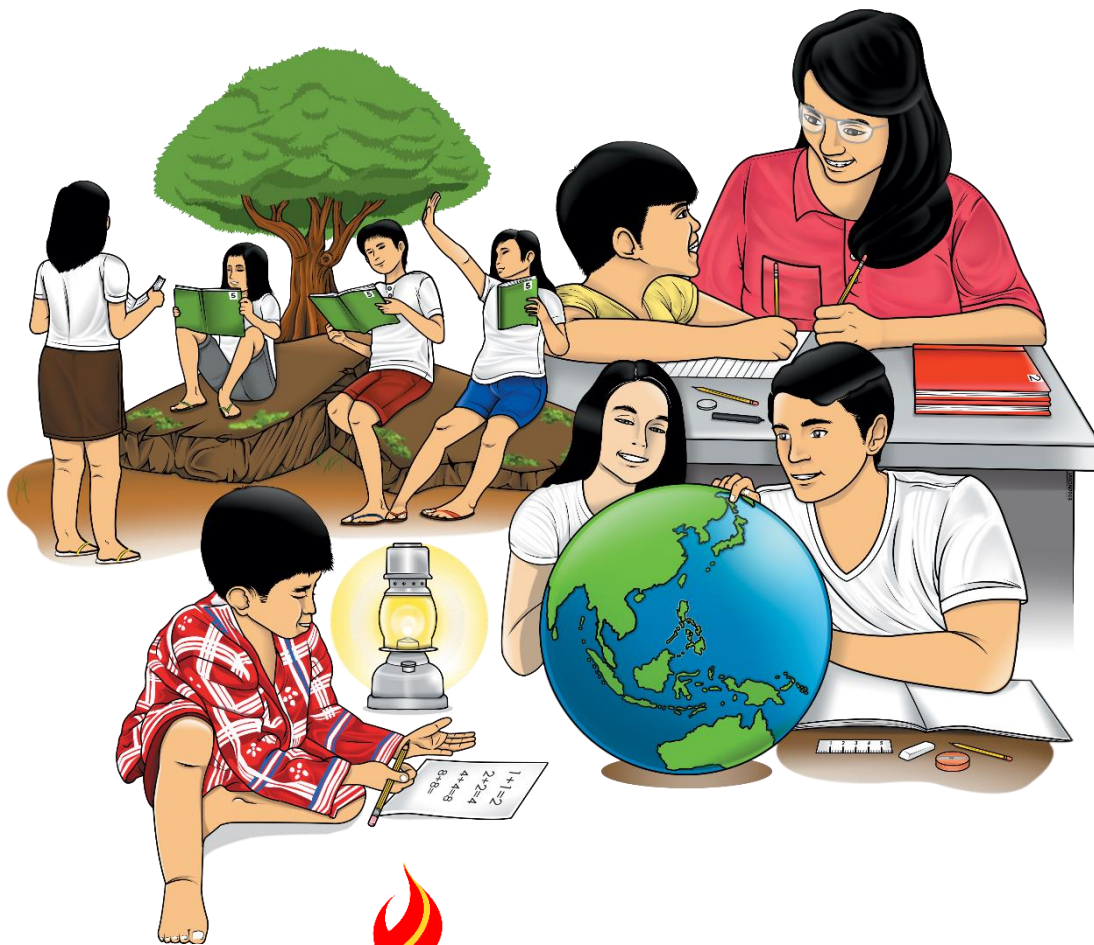


5

Science

Quarter 1 – Module 3

Lesson 1: How We Can Manage Our Waste



Science – Grade 5
Alternative Delivery Mode
Quarter 1 – Module 3 Lesson 1: How We Can Manage Our Waste
First Edition, 2020

Republic Act 8293, Section 176 states that: No copyright shall subsist in any work of the Government of the Philippines. However, prior approval of the government agency or office wherein the work is created shall be necessary for exploitation of such work for profit. Such agency or office may, among other things, impose as a condition the payment of royalties.

Borrowed materials (i.e., songs, stories, poems, pictures, photos, brand names, trademarks, etc.) included in this module are owned by their respective copyright holders. Every effort has been exerted to locate and seek permission to use these materials from their respective copyright owners. The publisher and authors do not represent nor claim ownership over them.

Published by the Department of Education
Secretary: Leonor Magtolis Briones
Undersecretary: Diosdado M. San Antonio

Development Team of the Module

Writers: Danilo D. Espera

Editors: Christie Anne D. Bihag, Laarni E. Relevo, Bernie Jude R. Lamograr,
Teodorico C. Peliño Jr.

Reviewers: Allan Garnace, Charity M. Nogra, Ryan R. Tiu

Layout Artist: Ismael T. Posion, Bella C. Alberca, Henrissa M. Sible

Management Team:

Ramir B. Uytico
Arnulfo M. Balane
Rosemarie M. Guino
Joy B. Bihag
Ryan R. Tiu
Rowena T. Vacal
Manuel P. Albaño
Henrietta T. Managbanag
Sherlita A. Palma
Felicidad T. Espinosa
Ismael T. Posion
Mauricio M. Catan
Socorro B. Ausa

Printed in the Philippines by _____

Department of Education – Regional Office No. VIII

Office Address: Government Center, Candahug, Palo, Leyte
Telefax: 053 – 323-3156
E-mail Address: region8@deped.gov.ph

5

Science

Quarter 1 – Module 3

**Lesson 1: How We Can Manage
Our Waste**

Introductory Message

For the facilitator:

Welcome to the **Science Grade 5** Alternative Delivery Mode (ADM) **Module on How We Can Manage Our Waste!**

This module was collaboratively designed, developed and reviewed by educators from both public and private institutions to assist you, the teacher or facilitator in helping the learners to meet the standards set by the K to 12 Curriculum while overcoming their personal, social, and economic constraints in schooling.

This learning resource hopes to engage the learners into guided and independent learning activities at their own pace and time. Furthermore, this also aims to help learners acquire the needed 21st century skills while taking into consideration their needs and circumstances.

As a facilitator, you are expected to orient the learners on how to use this module. You also need to keep track of the learners' progress while allowing them to manage their own learning. Furthermore, you are expected to encourage and assist the learners as they do the tasks included in the module.

For the learner:

Welcome to the **Science Grade 5** Alternative Delivery Mode (ADM) **Module on How We Can Manage Our Waste.**

This module was designed to provide you with fun and meaningful opportunities for guided and independent learning at your own pace and time. You will be enabled to process the contents of the learning resource while being an active learner.

This module has the following parts and corresponding icons:



What I Need to Know

This will give you an idea of the skills or competencies you are expected to learn in the module.



What I Know

This part is composed of a 10-item activity in order to check what you already know about the lesson to take. If you get all the answers correct (100%) you may decide to skip this module.



What's In

This is a brief drill or review to help you link the current lesson with the previous one.



What's New

In this portion, the new lesson will be introduced to you in various ways; a story, a song, a poem, a problem opener, an activity or a situation.



What is It

This section provides a brief discussion of the lesson. This aims to help you discover and understand new concepts and skills.



What's More

This comprises activities for independent practice to solidify your understanding and skills of the topic. You may check the answers to the exercises using the Answer Key at the end of the module.



What I Have Learned

This includes questions or fill on the blank sentence/paragraph to process what you learned from the lesson.



What I Can Do

This section provides an activity which will help you transfer your new knowledge or skill into real life situations or concerns.



Assessment

This is another 10-item task which aims to evaluate your level of mastery in achieving the learning competency.



Additional Activities

In this portion, another activity will be given to you to enrich your knowledge or skill of the lesson the learned.



Answer Key

This contains answers to all activities in the module.

At the end of this module you will also find:

References

This is a list of all sources used in developing this module.

The following are some reminders in using this module:

1. Use the module with care. Do not put unnecessary mark/s on any part of the module. Use a separate sheet of paper in answering the exercises.
2. Don't forget to answer *What I Know* before moving on to the other activities included in the module.
3. Read the instructions carefully before doing each task.
4. Observe honesty and integrity in doing the tasks and checking your answers.
5. Finish the task at hand before proceeding to the next.
6. Return this module to your teacher/facilitator once you are through with it.

If you encounter any difficulty in answering the tasks in this module, do not hesitate to consult your teacher or facilitator. Always bear in mind that you are not alone.

We hope that through this material, you will experience meaningful learning and gain deep understanding of the relevant competencies. You can do it!



What I Need to Know

The waste that we generate per day is more than what landfills can accommodate. This is why some wastes are left uncollected in different places. Uncollected waste causes land, water, and air pollution and any form of pollution is harmful to all organisms. Therefore, we should practice 5Rs to manage waste in the environment and help make our surroundings clean and tidy.

After working on this module, you will be able to understand how people can manage their waste through the 5Rs: Reduce, Reuse, Recycle, Repair or Recover

Note: All the answers to the activities should be written in a separate answer sheet



What I Know

Directions: Write the letter of the correct answer.

1. Why are some waste in other places left uncollected?
 - A. Our landfills have a lot of space for our wastes.
 - B. Our landfills cannot accommodate all our wastes.
 - C. Our collected waste products are fewer everyday.
 - D. Our garbage collectors in our place are few.

2. What will happen to uncollected waste?
 - A. It can produce waste.
 - B. It can cause pollution.
 - C. It can produce plastic.
 - D. It can cause garbage.

3. Why is it important to use the 5Rs technique?
 - A. It can produce more waste.
 - B. It can pollute the environment.
 - C. It can harm living things.
 - D. It can lessen the wastes every day.

4. What is the main reason for practicing the 5Rs?
 - A. To combat environmental problems
 - B. To pile more trash in the landfill
 - C. To worsen the environmental problems
 - D. To throw the garbage everywhere

5. What are the components of 5Rs techniques?
 - A. Reducing, remaking, recycling, recovering, refilling
 - B. Reselling, reducing, remaking, recovering, repairing
 - C. Reducing, reusing, recycling, recovering, repairing
 - D. Reusing, reselling, refilling, recovering, repairing

6. The following are opportunities in using the 5Rs techniques except _____.
 - A. selling recyclable materials to junk shops
 - B. selling handcrafted products made of recyclable materials
 - C. buying recyclable materials and sell these to the companies
 - D. buying more plastic bags to put more waste

7. How can we save our planet from its environmental problems?
 - A. Be a good listener
 - B. Be a good child
 - C. Be a good steward
 - D. Be a good pollutant

8. Which of the following is NOT an example of physical change?
 - A. Dissolving of sugar in water
 - B. Smashed potato
 - C. Explosion of dynamite
 - D. Blown by the wind

9. It is a change in the form, appearance, and composition of a material.
 - A. Chemical change
 - B. Physical change
 - C. Neutron
 - D. Population

10. It is the proper way of waste segregation.
 - A. Responsible waste disposal
 - B. Responsible parenthood
 - C. Responsible pupil
 - D. Responsible person

Lesson

1

How Can We Manage Our Waste: The 5R's Technique



What's In

Directions: Study the pictures of the new products created or made and identify what common materials are used.



<https://www.flickr.com/photos/25802865@N08/3047321982/>



<https://www.flickr.com/photos/sarahracha/3615009752>



<https://www.af.mil/News/Article-Display/Article/138033/civilian-makes-sculptures-from-recyclables/>



<https://www.jpl.nasa.gov/edu/teach/activity/roving-on-the-moon/>

1. What materials are shown in the picture?
2. Where can we find these materials?
3. Are these materials common to our locality?



What's New

Directions: The following shows the application of 5Rs. Label them correspondingly with reduced, reused, recycled, repaired or recovered.

1.



Eco bags

<https://www.neepix.com/photo/230404/bag-shopping-eco-friendly-jute-large-handle>

2.



Scrap wood as fence

<https://www.piqsels.com/en/public-domain-photo-fizmn>

3.



Tires remodeled into outdoor seats

https://commons.wikimedia.org/wiki/File:Tires_recycled_and_transformed_into_seats_arranged_at_the_beach.jpg

4.



Used jars made as containers/ canisters

<https://www.pexels.com/photo/aroma-aromatic-assortment-containers-458796/>

5.



Animal manure

<https://www.flickr.com/photos/barbourians/7442875160>



What is It

What are the different ways of managing waste? What are the specific materials that can be reduced, reused, recycled, repaired, or recovered?

There are strategies that can be used in handling waste materials found in our home and community such as the 5 R's Technique. This technique is composed of five (5) ways we can manage our wastes such as:

- (1) **Reducing**- using alternative materials such as using eco-bags instead of plastic cellophane to minimize wastes from plastics;
- (2) **Reusing**- finding another way for materials that have already been used such as using old but usable shoes
- (3) **Recycling**- producing new product out of discarded materials such as making decoration (vase, figurines) from used/scrap papers)
- (4) **Recovering** – making the most out of the waste by regenerating energy such as using peelings of fruits and vegetables as plant fertilizers
- (5) **Repairing** – fixing broken things so that they can be used again such as sewing and mending old clothes.

As a whole, the 5 R's Technique helps in minimizing garbage to avoid pollution in air, water, and land.

Now, think of some situations in your home or community that you have observed or experienced that use the 5 techniques mentioned. Have you practiced using the 5 techniques at home? In your community? If yes, you and your family are certainly caring for the environment! Congratulations!"



What's More

Activity 1

Directions: Write the number of the sentence in the appropriate column as to reduce, recycle, repair, and recover.

| Reduce | Reuse | Recycle | Repair | Recover |
|--------|-------|---------|--------|---------|
| | | | | |

1. Old jeans were donated to the victims of the typhoon.
2. Jason placed and carried his groceries in old plastic grocery bags.
3. Margarete used empty plastic bottles as flowerpots.
4. Instead of buying a new bag for the coming school days Denise washed and fixed her old one.
5. Mr. Cruz collected the chicken manure in his poultry and gave it to a shop that can convert biodegradable materials.

Activity 2

Directions: Answer the puzzle with different waste management technique. Base your answer from the description below.

| | | | | | |
|----|----|--|----|--|---|
| | | | 4. | | 5 |
| | 3. | | | | |
| 1. | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| 2. | | | | | |

ACROSS:

1. Simply means lessen the use of unnecessary materials
2. Fixing or restoring broken materials to be used again

DOWN:

3. Processing the waste materials to make another product
4. To use again if not by you, then by others
5. Taking energy or materials from wastes that cannot be used anymore



What I Have Learned

Directions: Supply sentences with the missing word to complete the paragraph.

The 5Rs of waste management is the modern way of handling garbage and waste materials. 1. _____ simply means lessen the use of unnecessary materials. It means buying only what you need. Meanwhile, 2. _____ means to use again if not by you then by others. Clothes, cooking wares, bags, and shoes are some of the examples. The processing of the waste materials to make another product is called 3. _____. 4. _____ is the fixing or restoring broken items to be used again. 5. _____ means taking energy or materials from waste that cannot be used anymore.



What I Can Do

Directions: Answer the following question:

As a grade five pupil, how can you help in managing our waste?



Assessment

Directions: Choose the correct answer in each situation on waste management.

1. If you have a garden in your backyard, which of the following materials cannot be used as fertilizers for your plants?
 - A. manure from cow
 - B. dried leaves
 - C. rice husk
 - D. candy wrappers
2. Pedro used few big boxes to plant tomatoes instead of many small pots. What technique did he apply?
 - A. Recycling
 - B. Reducing
 - C. Reusing
 - D. Repairing

3. Why are we encouraged to apply 5 R's technique?
 - A. it will make us rich.
 - B. it will lessen the volume of garbage produced daily.
 - C. It will not need to buy more trash bins.
 - D. It will make our house more beautiful.

4. Your Father is so eager to fix your house after it was destroyed by a strong typhoon, what waste management did he apply?
 - A. Recycle
 - B. Repair
 - C. Reduce
 - D. Reuse

5. One good characteristic of being a responsible consumer is to refrain from buying new materials when you still have supplies, what waste management is being practiced?
 - A. Reuse
 - B. Repair
 - C. Recover
 - D. Reduce

6. Which of the following statements shows a person practice recovering materials to help save the environment?
 - A. Carol bought good vegetables only enough for her one-day meal.
 - B. Instead of throwing away all the soft drink cans he bought, Dennis used them as pots for his plants.
 - C. Denise, instead of buying a new bag for the upcoming school days, washed and fixed held old one.
 - D. Mr. Cruz collected the chicken manure in his poultry farm and gave it to a shop that can convert biodegradable material to LPG.

7. Because he/she cannot go out of the house, Sarah decided to make her time more productive. She made a figurine from the empty seashells they have out from their yesterday's lunch. What technique did she apply?
 - A. Recycling
 - B. Repairing
 - C. Reducing
 - D. Recovering

8. Which of the following situations involves recycling?
 - A. Sean Beda made a string notebook out of the unused pages of his old spiral notebook.
 - B. Arianne Denise would always place oil on the gears of her bicycle to prevent rusting.
 - C. Kent Denzel collected biodegradable waste materials then made a compost.
 - D. CJ Kean made a bag out of his old worn-out pants.

9. Which of the following is the best substitute for plastic cellophane if you want to go to the grocery store?
 - A. Newspaper bags
 - B. Big cans
 - C. Banana leaves
 - D. Cloth bags

10. Ana, a 15 year-old girl, gave her old dresses to her younger neighbor. What is she doing?
 - A. Recycling
 - B. Reducing
 - C. Reusing
 - D. Recovering



Additional Activities

Directions: Write TRUE if the statement is correct and FALSE if it is wrong.

1. Burying trash can reduce household waste.
2. Leftover food can be thrown into the garbage cans.
3. Grass clippings and food scraps can be recycled by composting.
4. Decomposable waste can be buried in the soil and change to compost.
5. Empty boxes and cardboards can be reused as storage files and organizers of materials at home.



Answer Key

Assessment

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

What I Have Learned

1. Reduce
2. reuse
3. recycling
4. Repair
5. Recover

What's More

Activity 1

1. Reuse
2. Reduce
3. Reuse
4. Repair
5. Recover

Activity 2

1. Reduce
2. Repair
3. Recycle
4. Reuse
5. Recover

What's New

1. Reduce
2. Repair
3. Recycle
4. Reuse
5. Recover

What I Know

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

References

Sarte, Evelyn T, Ednaliza R Garcia, Mary Jean Dela Cruz, and Harold Arradaza. 2016. *Science Beyond Borders*. Quezon City: Vibal Group Inc.

"Christmas Decoration #3". 2020. Flickr.
<https://www.flickr.com/photos/25802865@N08/3047321982/>.

"File: Tires Recycled And Transformed Into Seats Arranged At The Beach.Jpg - Wikimedia Commons". 2020. Commons.Wikimedia.Org.
https://commons.wikimedia.org/wiki/File:Tires_recycled_and_transformed_into_seats_arranged_at_the_beach.jpg.

"Green, Grass Lawn, Wooden, Fence, Garden, Wood, Plank, Summer, CC0, Public Domain, Royalty Free | Piquesels". 2020. Piquesels.Com.
<https://www.piquesels.com/en/public-domain-photo-fizmn>.

"Plastic Basket". 2020. Flickr.
<https://www.flickr.com/photos/sarahracha/3615009752>.

"Roving On The Moon Activity | NASA/JPL Edu". 2020. NASA/JPL Edu.
<https://www.jpl.nasa.gov/edu/teach/activity/roving-on-the-moon/>.

For inquiries or feedback, please write or call:

Department of Education – Bureau of Learning Resources (DepEd-BLR)

Ground Floor, Bonifacio Bldg., DepEd Complex
Meralco Avenue, Pasig City, Philippines 1600

Telefax: (632) 8634-1072;8634-1054;8631-4985

Email Address: blr.lrqad@deped.gov.ph* blr.lrpd@deped.gov.ph