What Is This Module About?

When you go to wet markets, what do you notice? What do you see in slums or squatter areas? Do you see garbage piled up on the sides of the street? This is just one indication of our garbage problem.

Garbage is associated with factors like population growth, urbanization, improper disposal of waste, and lack of proper waste management. Garbage is likewise pointed out as the cause of other problems like floods, epidemics, air and water pollution.

How can we solve the garbage problem? How can we use garbage for productive purposes? Can we bring garbage back to life? This module will answer these questions and more.

The module has three lessons:

Lesson 1 – *Understanding Our Garbage Problem*

Lesson 2 – *Segregating Garbage*

Lesson 3 – *What Is Recycling?*

What Will You Learn From This Module?

After studying this module, you should be able to:

- explain our current waste disposal practices;
- identify some negative effects of garbage;
- explain how to segregate garbage properly;
- explain what recycling is; and
- explain the benefits of recycling.

Let's See What You Already Know

Before you start studying this module, answer these questions. This will determine how much you know about the topic that we are going to discuss.

Encircle the letter of the best answer.

1. Which of the following is a major cause of our garbage problem?

   a. lack of a market for recycled products

   b. increasing number of people's activities due to increase in population

   c. lack of concern on personal hygiene

   d. lack of technology to aid in proper disposal of garbage

2. Which of the following statements about open dump sites is not true?

   a. Toxic materials from dump sites can go to streams and lakes.

   b. Open dump sites can cause contamination of water sources.

   c. Open dump sites can cause illnesses to garbage collectors as well as to people living near the dump site.

   d. Open dump sites make good use of vacant lots.

3. When disposing of waste, it is important that _____.

   a. they are sorted out into biodegradable and nonbiodegradable wastes

   b. they are put together in a single bag to minimize the number of plastic bags used

   c. they are crushed, shredded or compacted

   d. they are burned

4. A biodegradable material _____.

   a. never breaks down completely

   b. may be recycled

   c. cannot be burned

   d. can decompose through natural means

5. Which of the following is a biodegradable material?

   a. plastic bag

   b. bottle

   c. rubber tire

   d. fish scales

6. Which of the following statements about recycling is not true?

   a. Recycling reduces the damage to the environment.

   b. Resources are maximized through recycling.

   c. Burning and shredding are primary recycling processes.

   d. Recycling is a circular process.

7. Which of the following is the best solution to the garbage problem?

   a. develop a habit for recycling used materials

   b. develop a crab mentality

   c. throw out things that you feel you do not need

   d. conserve energy

8. Recycling involves _____.

   a. reusing, donating and exchanging waste whenever possible

   b. throwing away things you can no longer use

   c. shredding, crushing and compacting waste

   d. burying and burning waste

9. Which of the following is not a benefit of recycling?

   a. Less time and money are consumed

   b. Natural resources are preserved

   c. More landfills are opened

   d. The work of garbage collectors is reduced

10. When wastes are recycled, they are _____.

    a. made into new raw materials

    b. made into new waste

    c. made into new trash cans

    d. just shredded to pieces for easy disposal

Well, how was it? Do you think you fared well? Compare your answers with those in the *Answer Key* on page 36 to find out.

If all your answers are correct, very good! This shows that you already know much about the topics in this module. You may still study the module to review what you already know. Who knows, you might learn a few more new things as well.

If you got a low score, don't feel bad. This means that this module is for you. It will help you to understand important concepts that you can apply in your daily life. If you study this module carefully, you will learn the answers to all the items in the test and a lot more! Are you ready?

You may go now to the next page to begin Lesson 1.

Understanding Our Garbage Problem

Look at the picture below.

I am sure you have seen a large portion of the country's waste ending up as unsightly litters on the streets, roadsides, islands and waterways. In this lesson, we will discuss our garbage problem, especially its causes and effects.

After studying this lesson, you should be able to:

- explain our current waste disposal practices; and
- identify some negative effects of our garbage problem.

Let's Think About This

What do you think is the cause of our garbage problem? Write down your ideas on the lines below.

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_____

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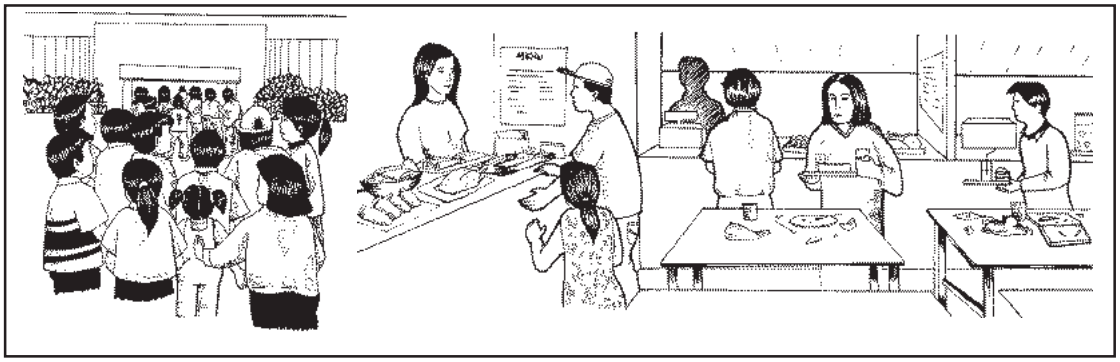
_____

Read on to find out if your ideas are correct.

Let's Learn

Why do we have a garbage problem?

Many factors contribute to our garbage problem. Foremost among these factors is the increasing number of people. With the increase in population comes the increase in people's activities, especially in urban areas like Metro Manila, Metro Cebu and Metro Davao.

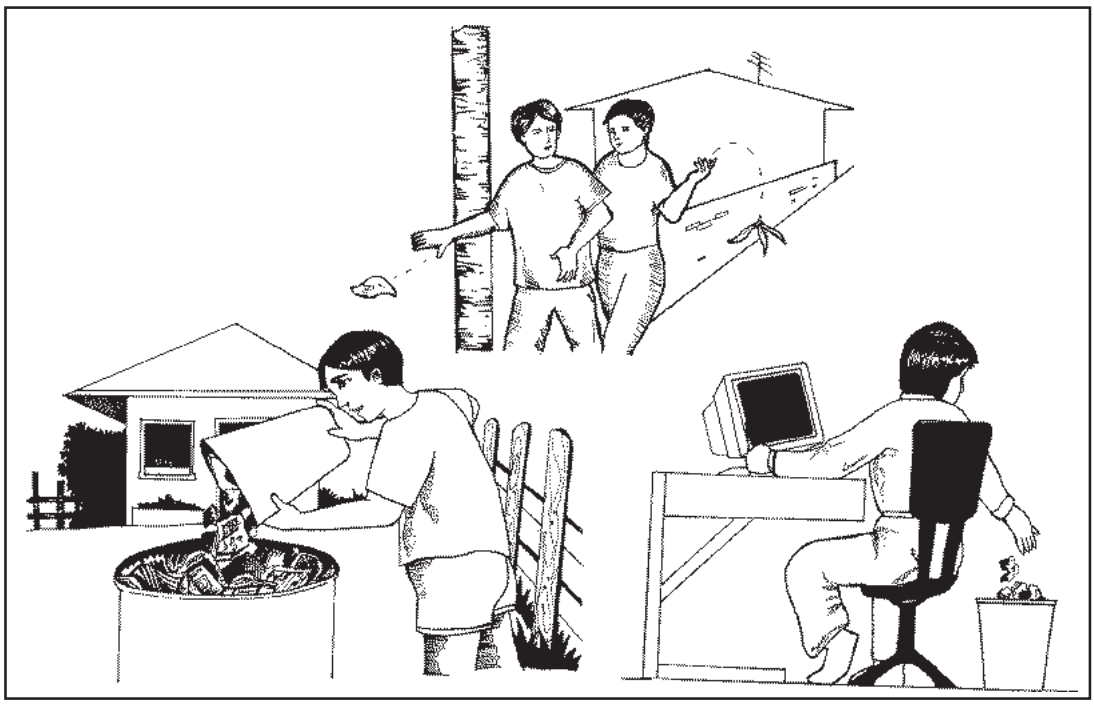


Take, for example, the case of shopping malls. Shopping malls depend and thrive on the number of people who visit and purchase goods. There, you will find not only stores but dining and recreation places as well. With all the different activities happening in the malls come the piles of garbage. You eat and then dispose of the food containers; you buy something and later on, dispose of the plastic or paper bag that was used to carry what you bought.

Because of the lack of concern and information about proper waste disposal, the production of so much waste leads to the unsightly heaps of garbage in heavily populated areas (i.e. cities and large municipalities).

Let's Think About This

Look at the pictures below. What message do they convey? Think of your answer before proceeding.



The pictures illustrate the fact that waste is produced everywhere—in homes, offices, factories, shops, establishments, etc. Where do you think all this garbage goes? Write your ideas on the lines below.

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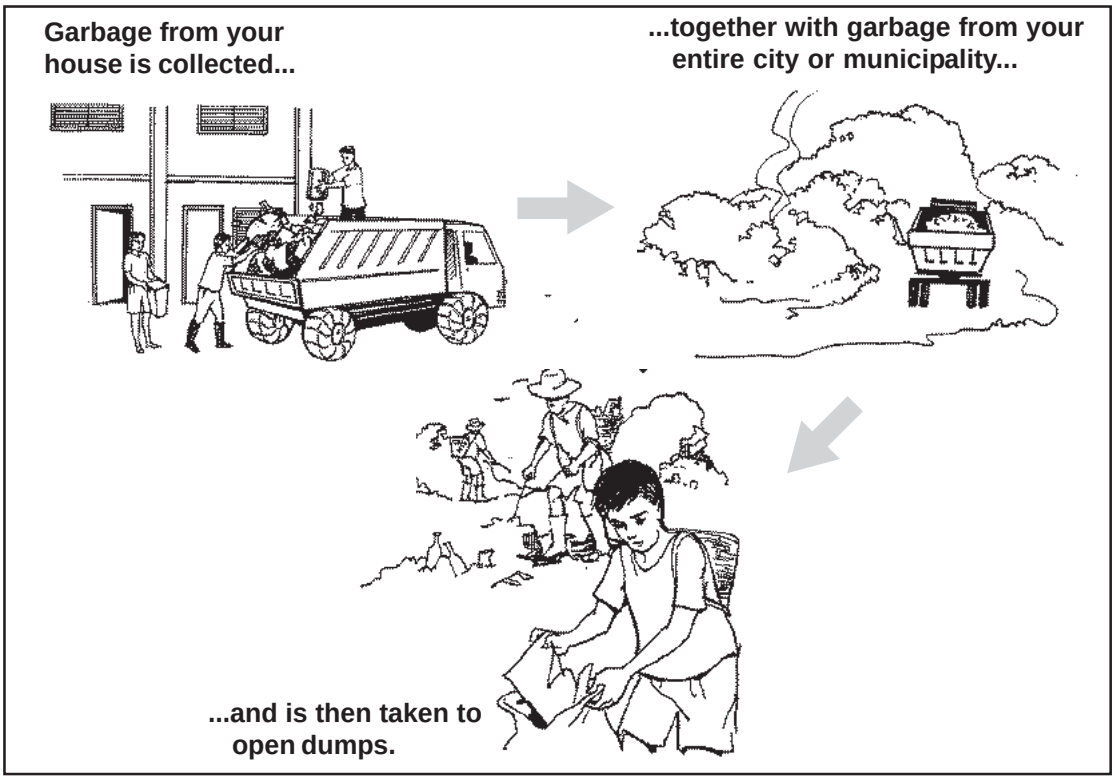
Let's find out if your ideas are correct.

Let's Learn

Where does our garbage go?

Currently, the municipal government or the mayor's office is responsible for collecting the waste in the city or municipality. In most cases, private firms are contracted to collect and dispose of the garbage. These firms then send the garbage trucks to your neighborhoods to collect the garbage.

Every day, a very large volume of waste is collected. In Manila alone, over 500 truckloads of waste are disposed of daily. The garbage that is collected from each city or municipality is then brought to open dumps. An example of an open dump where Metro Manila's trash go is the one in Carmona, Cavite. What about in your place? Do you know the location of your nearest open dump site?



Let's Try This

Find out where the garbage from your community is brought to. What other communities dump their garbage in that place?

Now, you may already have a good idea of how much waste is produced. In the remote areas of provinces, the garbage problem is not so big, even though no garbage trucks go around the place to collect the wastes. The common practice is to burn the garbage. However, this also has some negative effects. For example, burning plastics produces the toxic gas carbon monoxide that causes air pollution.

Let's Try This

What if the government says that a vacant area near your place will be the site of a new open dump? Will you agree or disagree? Write your opinion on the lines below. Give reasons for your answer.

_____

_____

_____

_____

_____

Chances are, you will disagree with the plan. Most people will not want a landfill or open dump in their area because of health reasons. An open dump is smelly and attracts all sorts of pests. Landfills can also cause contamination of groundwater. They can leak toxic materials into lakes and streams. Once groundwater is contaminated, it is very difficult and sometimes even impossible to clean up.

In the future, existing open dumps will become full, and people will not want one near their area. That is why it is important for everyone to be involved in solving our garbage problem.

Let's Try This

Besides landfills, can you think of other problems that garbage can create? Write them down in the spaces below.

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Garbage can clog waterways, thereby causing floods. It can contaminate tap and irrigation water, kill fish in ponds and rivers, and destroy ecosystems. Aside from causing toxins, it can also cause many illnesses. This is because rats, flies, cockroaches and other pests are attracted to garbage. These pests can enter your house and contaminate the food you eat. Lastly, the landfills consume valuable lands which can otherwise be used for farming and food production.

Let's Try This

Think of other negative effects of garbage. Write them down below.

_____

_____

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Let's Remember

Before you proceed to Lesson 2, study the important points of Lesson 1.

- Our garbage problem is largely caused by the increase in population, which in turn leads to an increase in the number of people's activities.
- After garbage is collected from your house they are taken to open dump sites. In remote areas of provinces, garbage is usually burned.
- Garbage can cause many problems like floods, illnesses and destruction of the environment.

Segregating Garbage

In Lesson 1, we discussed our current garbage problem. However, it is not enough that we know the problem. The more important thing is for us to know what to do about it. In this lesson, we will start learning about what we should do and how we can contribute in solving our garbage problem.

After this lesson, you are expected to be able to:

- explain the difference between biodegradable and nonbiodegradable wastes; and
- explain how to segregate garbage properly.

To be able to help solve our garbage problem, the first thing that you should know is how to segregate your garbage. Segregating means classifying or grouping the components of your garbage.

Let's Try This

Why do you think we have to segregate our garbage? Write down the reasons why segregating is advantageous.

_____

_____

_____

How will you segregate your garbage?

_____

_____

_____

_____

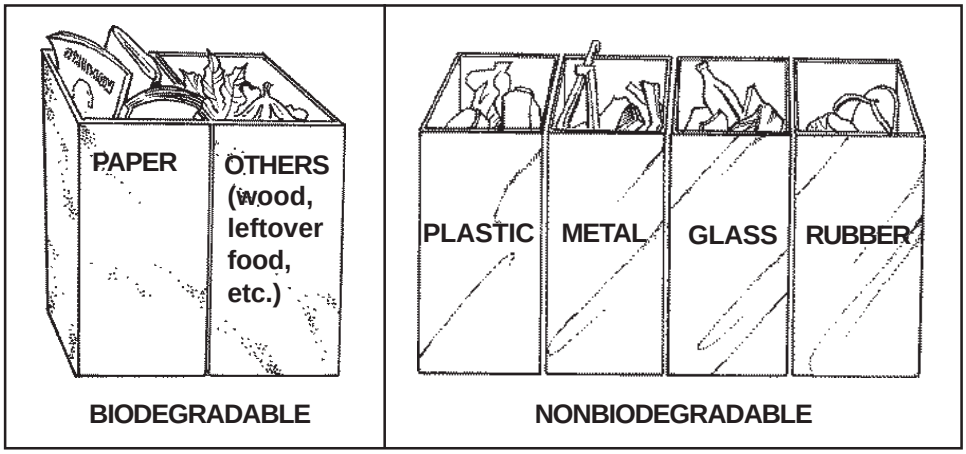
_____

It is important that we classify our garbage because this will help us in identifying which materials can still be used in some ways. There are two steps to be done.

The **first step** is to group the garbage into two: biodegradable and nonbiodegradable.

A **biodegradable** material is something that can be broken down completely or can decompose through natural means. These materials are those made of paper or wood or similar materials. Some examples are phonebooks, paper, animal wastes, leaves, twigs and leftover food.

Nonbiodegradable materials, on the other hand, are those that cannot be decomposed. Burning will not eliminate them completely. Examples are materials made of plastic, metal, glass and rubber.



Let's Think About This

Have you ever tried digging a hole on the ground? Have you ever seen broken glasses, plastic bags, cans, etc. buried in the soil?

The materials that you see are nonbiodegradable. They did not decompose and were, therefore, left undestroyed while buried in the soil.

Let's Try This

Now look at your garbage can. List some of the materials that you see. Classify them into biodegradable and nonbiodegradable.

Write your answers in the table below.

Biodegradable	Nonbiodegradable

For comparison, look at the sample table below. Here, the items are classified according to whether they will break down completely or not. (The items in your list may differ from those given, but what is important is that they should be grouped correctly.)

Biodegradable	Nonbiodegradable
vegetable scraps	juice containers
spoiled rice	plastic grocery bags
old phonebooks	rubber slippers
newspapers	old pots and pans
cardboard pizza boxes	ballpens
garden weeds	glass soft drink bottles

Vegetable scraps, spoiled rice and other food and plant materials easily decay. Likewise, materials made of paper like pizza boxes, phonebooks and newspapers dissolve and disintegrate naturally. These are all biodegradable materials. On the other hand, materials made of plastic like grocery bags, ballpens, juice containers, rubber-like slippers, aluminum (like pots and pans), and soft drink bottles will never completely decompose.

After you have separated the biodegradable from the nonbiodegradable, group the things that are made of the same materials. This is the **second step.**

Remember that biodegradable materials can be made of paper or other materials that decompose. Nonbiodegradable materials can be made of plastic, metal, glass or rubber.

Here are examples:

Biodegradable materials

- Paper — cardboards, bond papers, newspapers, phonebooks, old letters, etc.
- Other materials that decompose — twigs, leftover food, vegetable scraps, garden wastes

Nonbiodegradable materials

- Plastic — grocery bags, toys, containers, tumblers, etc.
- Metal/aluminum — soda cans, canned goods containers, pots, pans, roofing sheets, etc.
- Glass — windows, lightbulbs, mirrors, bottles
- Rubber — tires

Now try to further segregate your garbage based on the materials they are made of.

Write your answers in the appropriate space provided.

Biodegradable		**Nonbiodegradable**			
PAPER	OTHERS	PLASTIC	RUBBER	GLASS	METAL/ ALUMINUM

Look at how the materials are grouped together:

Biodegradable		**Nonbiodegradable**			
PAPER	OTHERS	PLASTIC	RUBBER	GLASS	METAL/ ALUMINUM
newspapers	vegetable scraps	grocery bags	slippers	soft drink bottles	old pots and pans
phonebooks	spoiled rice	juice containers			
pizza boxes	garden weeds	ballpens			

Your job does not end with sorting out the garbage though. After you have segregated the garbage, choose proper containers for them. You may decide to put them in cans, sacks, bags, bins, etc., to facilitate sanitary and efficient handling, storage, collection and transportation.

Let's See What You Have Learned

You need to give two answers for each number. First, classify whether the waste is biodegradable or nonbiodegradable. Next, classify the waste according to what material it is made of: paper, plastic, rubber, glass or metal.

1. old magazines _____ _____
2. medicine bottle _____ _____
3. broken mirror _____ _____
4. tumbler _____ _____
5. ball _____ _____
6. pots and pans _____ _____

Check your answers using the *Answer Key* found on page 36.

Did you get all the correct answers? If yes, very good! If no, read the lesson again before you proceed to the next.

Let's Remember

Before you proceed to Lesson 3, do not forget the important points in this lesson.

- Garbage should be segregated. They can either be biodegradable or nonbiodegradable.
- Biodegradable materials are those that can be broken down completely.
- Nonbiodegradable materials are those that cannot decompose.
- In addition, garbage items should be classified according to the material they are made of.

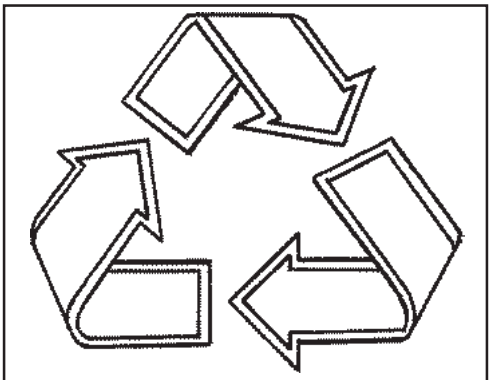
What Is Recycling?

In Lesson 2, you learned how to properly segregate garbage. Segregating garbage is just one part of recycling. Recycling is a process, where materials can be used over and over again.

After this lesson, you should be able to:

- define what recycling is;
- explain how to recycle garbage;
- explain the benefits of recycling; and
- describe sustainable practices and "recycling habits."

Let's Think About This



Recycling Symbol

What is your interpretation of the recycling symbol?

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Let's find out if your idea is correct.

Let's Learn

What is recycling?

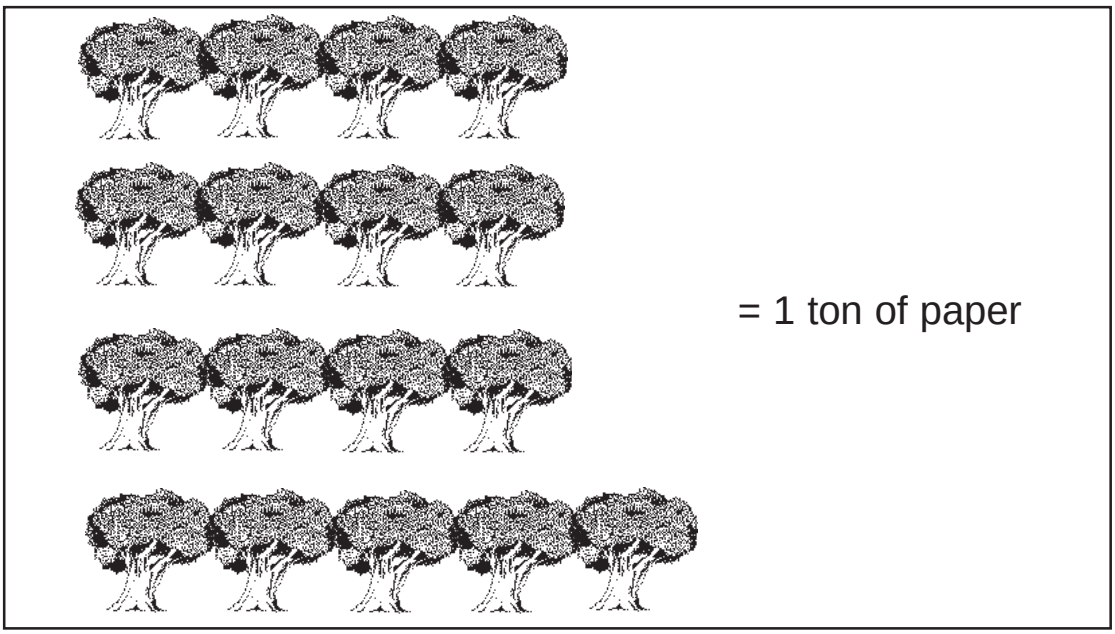
The recycling symbol conveys a cycle. Why? Because recycling involves activities that make it possible for materials to be used over and over again. This way, there will be a decreased need to get raw materials from the environment to produce commercial products. In other words, nothing should be disposed of permanently. This is why recycling is considered an example of **sustainable practices.**

What are sustainable practices?

Sustainable practices provide continuing economic and social benefits without destroying the environment.

Whatever conveniences and luxuries we are getting right now should not mean damage to our environment. This means that, while we continue to get raw materials from the environment, we should likewise be able to ensure that the environment is well taken care of. Doing this, we will be able to maintain the balance between our needs for natural resources and environmental protection.

For example, do you know that 17 trees need to be cut to produce a ton of paper? So, while paper seems to be very accessible, we should also remember that our environment is affected.



If there are sustainable practices, there are also **unsustainable practices.** Unsustainable practices are "quick fixes" that fill our immediate need for resources. They are said to be unsustainable because they cause the depletion of our resources. If this continues, nature may no longer be able to sustain us. Our environment may be destroyed beyond repair.

Let's Try This

Based on what we have discussed, can you think of some sustainable practices? Here is an example to guide you. When you buy soft drinks, you often bring a bottle to the store. This bottle is then replaced with a new one that is full. This practice allows the continued use of bottles without using up the supply of bottles.

Can you also list some unsustainable practices? For example, each time you buy something at the grocery, you use a new plastic bag. The problem is, the raw materials used to make each plastic bag comes from our natural resources. Each plastic bag, therefore, depletes our natural resources.

Sustainable Practices	**Unsustainable Practices**
Ex: bringing an empty soft drink bottle every time you buy soft drinks	Ex: using a new plastic bag each time you buy groceries
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Let's Try This

What recycling practices are you aware of? Write them down in the spaces below.

_____

_____

_____

_____

_____

Let's find out if your ideas are correct.

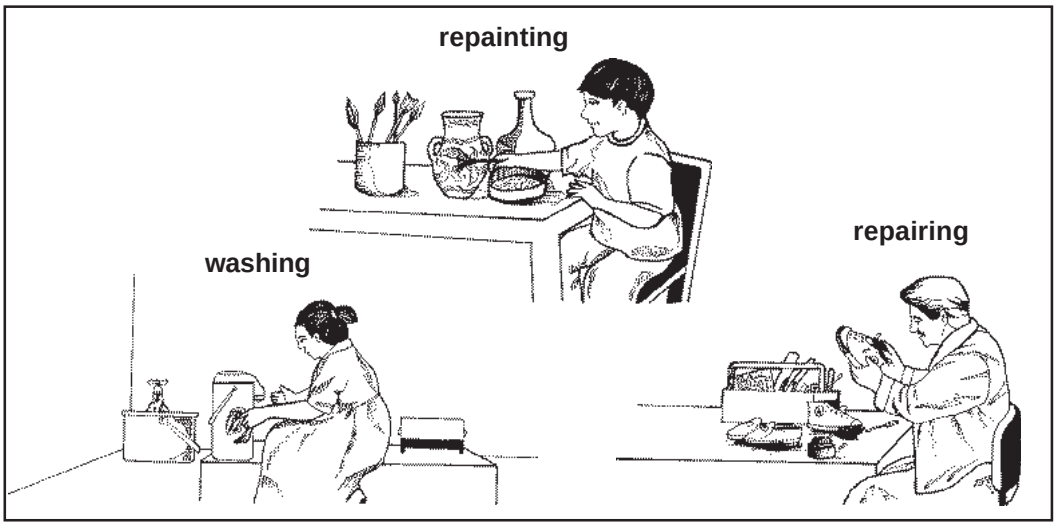
Let's Learn

How do you recycle?

Recycling involves:

1. ***Reusing things as much as you can.***

Reusing products prolongs the life of these materials, thus delaying final disposal. Reusing can mean repairing, washing, repainting and the like.



In fact, if you want to be a recycling advocate, you can refuse to buy or choose things that you cannot reuse. Returnable containers like the ones for soft drinks are preferable and should be returned promptly. You may also want to buy secondhand products because this means that you don't use new things and you then help to conserve resources.

Let's Try This

Look at your garbage can. Which of the things there can you still reuse?

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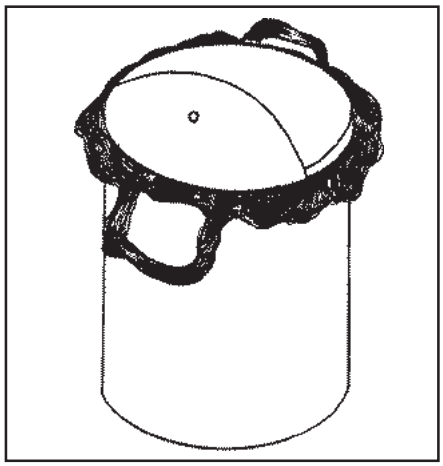
Get these materials, clean them up and try to come up with ideas on how to reuse them.

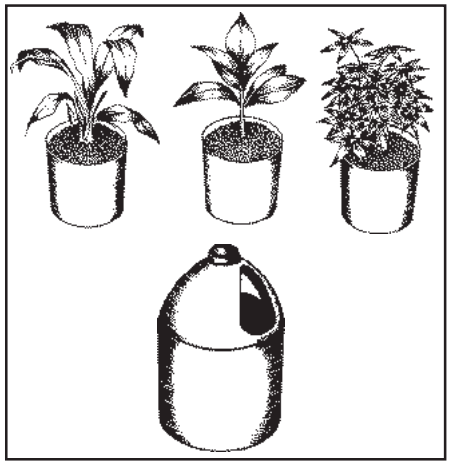
Here are some more ideas on how you can reuse things in your house.

Plastic grocery bags



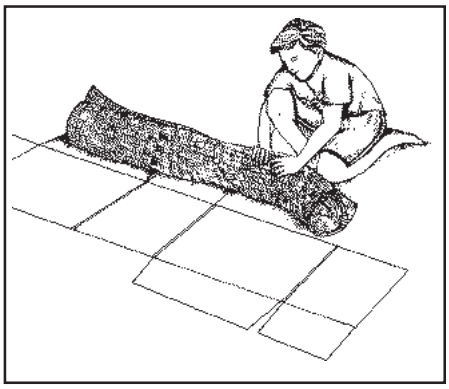
- Use them as containers when going to the market.
- Use them as liners in garbage cans.
- Use them for keeping things in the house.

Plastic beverage bottles



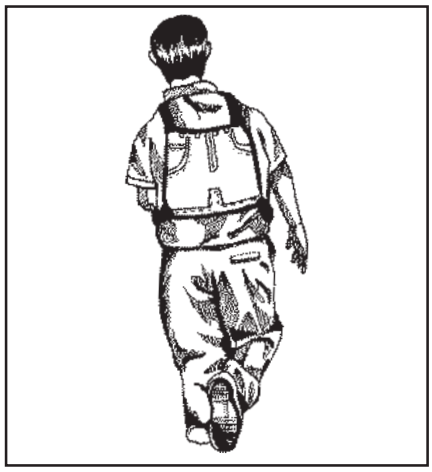
- Fill them with sand and use as doorstops.
- Use them as pots.
- Use large sports drink bottles as pitchers.

Cardboard boxes



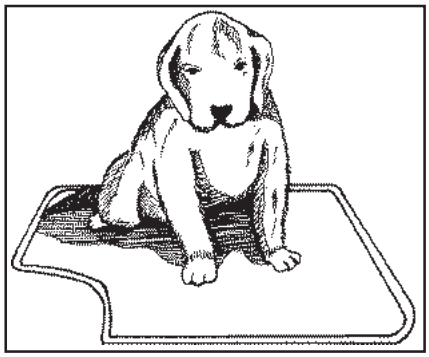
- Use them for under-the-bed storage.
- Use as beds for small pets.
- Use them as sleeping mats to protect you from the cold floor.
- Use them as door rugs.

Old jeans



- Cut and sew them into usable pieces like a purse or bag.
- Use them for cleaning things around the house.

Automotive floor mats (rubber or carpeted)



- Use as floor mats for leaky containers in your garage.
- Put in a pet cage to serve as a "bed" for your pet.
- Put under pet water or food dishes to catch the spills.

2. ***Donating and exchanging***

You can pass on things that you do not need to family members, neighbors, friends, your local church or charity institution. You may also exchange old things that you have with new ones. Clothes and shoes that no longer fit you may be passed on so that others can use them. Even toys you no longer like can be given to others.

When materials cannot be reused, donated or exchanged, you can pass the job of recycling them to factories, which have the machinery to convert these materials into new ones.

3. ***Recycling by machines in factories***

Recycling in this case means breaking down disposed-of materials and creating new ones from them. For example, used papers are shredded in paper mills and made into new ones. This way, there will be no need to cut down trees to create new papers.

Glass and steel products can be recycled by special machines. Glass jars and non-reusable bottles for example, are sorted based on their colors, then crushed and melted and made into new glass products. Aluminum, steel and tin cans can all be recycled and converted into raw materials. Even some plastics can be recycled by special machines into building materials.

Let's Try This

Look at your garbage can again. List down all the items in it. Write them in the spaces below.

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_____

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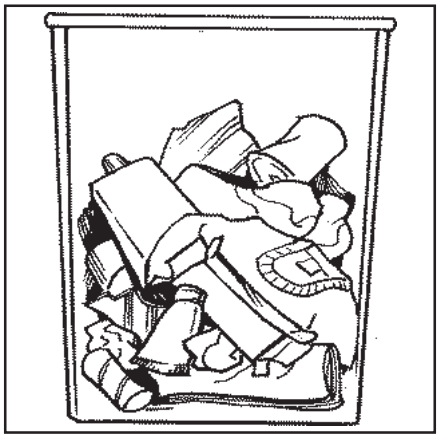
_____

I'm sure you came up with a variety of things. Look at the sample list below.

Scratch paper
Tissue paper
Cotton buds
Gel container
Perfume box
Broken mirror
Old T-shirt
Alcohol container
Plastic grocery bag
Soft drink can



Take a look at this list and notice that everything can actually be recycled. So, if this were your list, you can take them out of your waste can and reuse them.

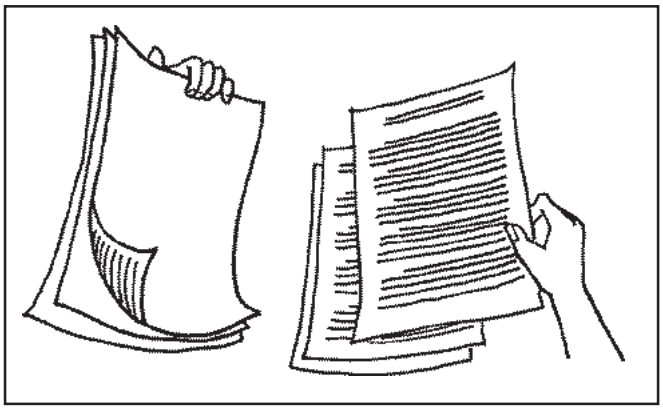
Group the materials that you have listed according to which can be reused, donated or exchanged and recycled. Write your answers in the table below.

Reusable	To Be Donated or Exchanged	To Be Recycled by Machine

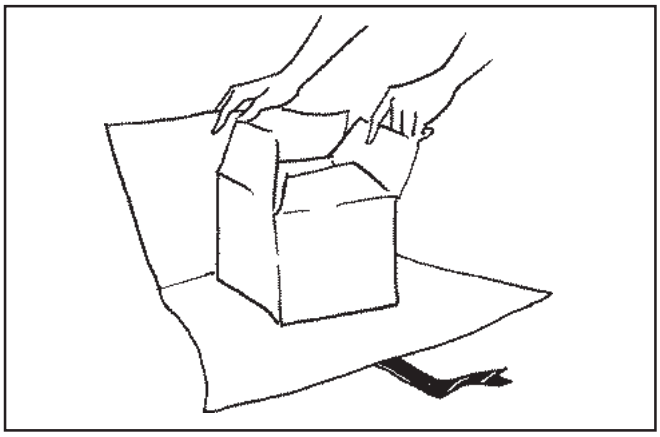
Look at what I came up with.

Materials that can be reused

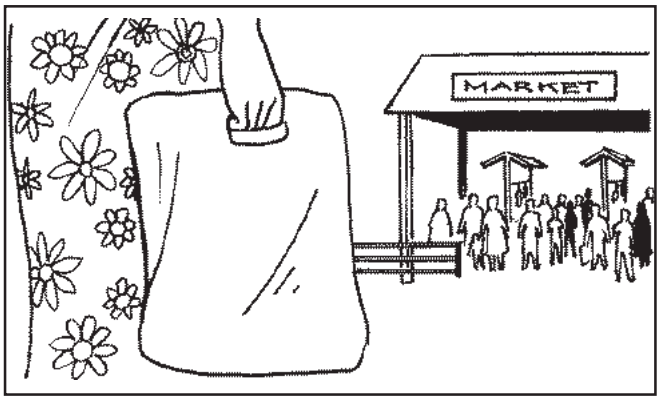
Scratch paper – If only one side of it was used, I can still use the other side.



Perfume box – I can use this as a gift box.



Plastic grocery bag – Instead of buying a new one, I can use this when I go to the market.



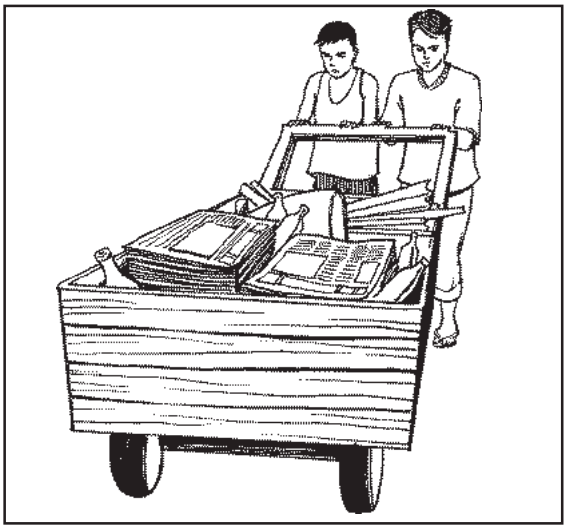
Materials that can be donated or exchanged

Old T-shirt – It may be old but it still looks good so I might as well donate it to someone who needs it.

Materials that can be recycled by machines in factories

Tissue paper
Cotton buds
Gel container
Broken mirror
Alcohol container
Soft drink can

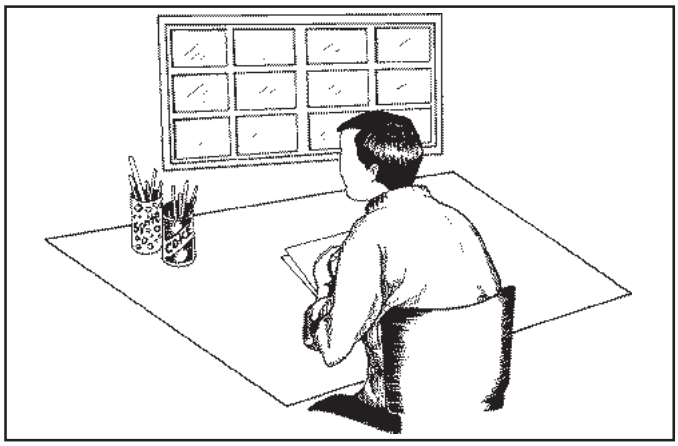
When you can no longer recycle the materials yourself, prepare them for recycling in factories. These recyclable materials are often collected by *dyaryo, bote*. These are the people who go around, pushing a cart filled with metal scraps, newspapers, and various plastic materials that were disposed of. They will then sell these to junk shops that will clean these materials and resell them to industries which use such materials.



Let's now study an example of how materials are recycled in factories.

Soft drink bottles and cans can be recycled by factories

Earlier we discussed that you can do your own recycling by reusing materials. In the case of soft drink cans or bottles, they can be used for making art works or as pencil holders.



After you have used and reused the soft drink cans, dispose of them properly.

How?

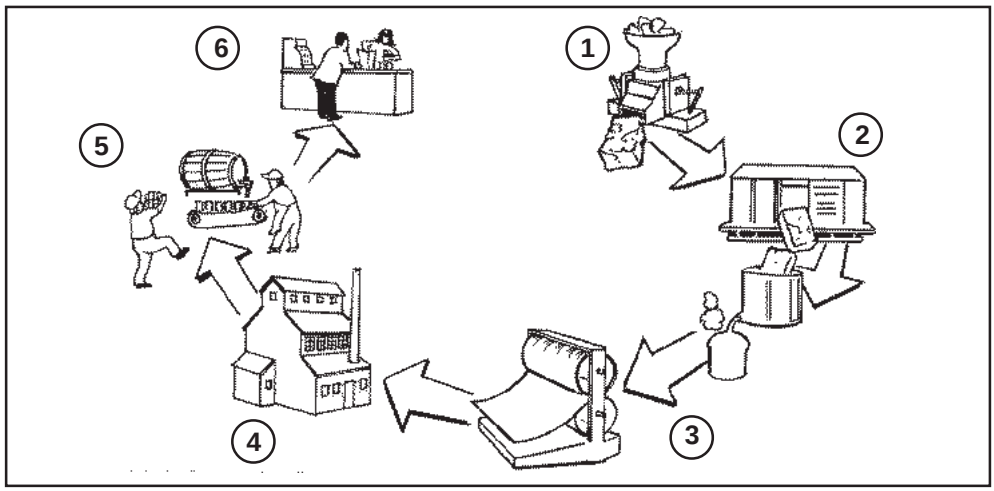
1. Make sure that the soft drink cans are all empty.

2. Put the cans together in one bag. (Remember, all nonbiodegradable go together; in your garbage can, group those that are made of the same material).

3. Crush the cans so that more cans can fit in the bag.

4. Bring the cans to a junk shop or have them collected by the *dyaryo, bote*.

Once the cans are in the junk shop, they are again washed and checked before being sold to factories. Once the crushed cans are in the factory, they undergo a series of processes as shown in the picture below.



As shown in the picture, the soft drink cans undergo a series of processes involving industrial machines.

1. After they are delivered in the factory, the cans are crushed.

2. Then, they are shredded and melted.

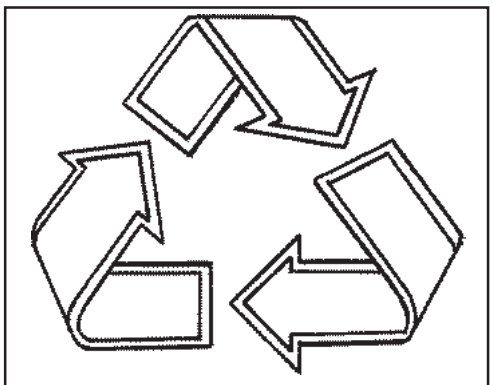
3. Next, they are made into can sheets much like the roof sheets that you see.

4. The cans are made again or manufactured as containers for soft drinks.

5. Once they are made into containers, they are then filled with soft drinks and packaged for sale.

6. The finished product is then brought to groceries and supermarkets to be sold.

So instead of using up raw materials such as iron and ore to make new soft drink cans, we can reuse existing materials to help solve the garbage problem at the same time.



Recycling Symbol

This is clearly a good example of recycling. As the symbol indicates, it involves a cyclical process—a continuous repetition.

Let's Try This

Now that you know what recycling is, what do you think are the benefits that you can get from recycling? Write them down in the spaces below.

_____

_____

_____

_____

_____

_____

_____

How many benefits have you identified? Let's check if your answers are correct.

Let's Learn

Benefits of recycling

The main goal of recycling is to reduce environmental damage resulting from the process of getting raw materials from the environment. As we have discussed earlier, recycling involves sustainable practices. But aside from this, recycling can reduce waste and pollution.

The raw materials used to produce the things that we use come from our natural resources. The process of getting the raw materials can cause environmental damage. To make paper, for example, trees can be improperly or carelessly cut down.

Likewise, the process of refining the raw materials that is normally done in factories can cause pollution and produce waste.

Recycling involves processes that allow continued use and reuse of materials. Thus, this avoids the need to get more raw materials from nature. In turn, this decreases the likelihood of environmental damage, pollution or the production of additional waste. This likewise results in fuller use of resources and energy conservation.

The other benefits of recycling are:

a. conservation of time, money and effort wasted in the collection and transportation of waste from one place to another. The money of the government used in the collection of garbage can be used as funds for other beneficial projects.

b. strengthening time-honored values of thrift, conservation, industry and ingenuity. It takes creativity to reuse materials that are considered ready to be discarded or thrown away. Recycling brings out the creative side in people for it makes them come up with ideas on how garbage can be used wisely or productively.

c. gratifying involvement of the people in the solution of their own problems, thus, enhancing their sense of community.

Now you know how to recycle. But you see, recycling can only be as effective as you want it to be. You have to develop a "recycling mentality" as well as "recycling habits." Once you develop them, you will automatically be inclined to recycle everytime you see discarded materials. You will ask yourself, "how can I avoid throwing this away?"

Let's Learn

Recycling Habits

Here are some practices that reflect a "recycling mentality."

1. Begin by understanding the value of the materials you throw in garbage bins.

2. Make it a habit to pick up litter that you see.

3. Encourage your neighbors and friends to recycle.

4. Try to create a market for recycled products by buying them whenever possible.

5. Buy things that are made of and packaged in recycled materials.

6. Buy things that are of good quality.

7. Practice recycling wherever you are.

Let's Remember

Do not forget the important points of this lesson.

- The recycling symbol conveys a cycle since recycling involves activities that make it possible for materials to be used over and over again.
- Recycling involves
  - reusing things
  - donating and exchanging
  - recycling by machines in factories
- Recycling reduces damage to our environment because resources are maximized.
- The "recycling habit" involves practices that are meant to make you think "How can I recycle this?" everytime you are about to throw away garbage.

Let's See What You Have Learned

Explain the relationship between recycling and sustainable practices.

_____

_____

_____

_____

_____

Check your answers against the *Answer Key* on page 37.

Let's Sum Up

Do not forget the important points of this module:

- Our garbage problem is largely caused by the increase in population, which in turn leads to an increase in the number of people's activities.
- After garbage is collected from your house, it is taken to open dump sites. In remote areas of provinces, garbage is usually burned.
- Garbage can cause many problems like floods, illnesses, and destruction of the environment.
- Garbage should be classified and segregated. Separate the biodegradable from the nonbiodegradable.
- Biodegradable materials are those that can be broken down completely.
- Nonbiodegradable materials are those that cannot be decomposed.
- In addition, each item of garbage should be classified according to the material it is made of.
- Recycling involves activities that make it possible for materials to be used over and over again.
- Recycling involves:
  - reusing as much as you can;
  - donating and exchanging; and/or
  - recycling through machines in factories.
- Recycling conserves time, money and effort.

What Have You Learned?

Now let us see how much you have learned from the module. Answer the test below.

I. Encircle the letter of the best answer.

1. What is the major cause of our garbage problem?

   a. Animals that scatter the garbage

   b. Garbage collectors who do not collect on time

   c. *Dyaryo, bote* people who collect plastics and scrap metals only rather than collecting all garbage

   d. Growing number of population that results in the increase of activities, thereby producing more garbage.

2. Which of the following does not belong to the group since it is made of a different material?

   a. Tumbler

   b. Grocery bag

   c. Pail

   d. Pans

3. How can we help solve the garbage problem?

   a. Through sustainable practices

   b. By recycling

   c. By reusing things

   d. All of the above

4. What does recycling mean?

   a. Mixing the garbage to break them down into small pieces

   b. Using materials over and over again

   c. Collecting trash from house to house using a bicycle

   d. Sorting out one's garbage into different types

5. How can you reuse things?

   a. By repairing them

   b. By washing them

   c. By repainting them

   d. All of the above

6. What does the recycling symbol mean?

   a. Materials are discarded once they are used

   b. Materials are reused over and over

   c. Materials are kept even when not used

   d. None of the above

7. Which of the following statements about biodegradable and nonbiodegradable materials is true?

   a. Biodegradable materials are edible while nonbiodegradable materials are not.

   b. Biodegradable materials burn while nonbiodegradable materials do not.

   c. Biodegradable materials can be recycled while nonbiodegradable materials cannot.

   d. Biodegradable materials decompose completely while nonbiodegradable materials do not.

8. Which of the following is a negative effect of an open dump site?

   a. It is a waste of money.

   b. It will deplete our natural resources.

   c. It will cause illnesses.

   d. None of the above

9. Which of the following is not a benefit of recycling?

   a. It strengthens values like courtesy and respect.

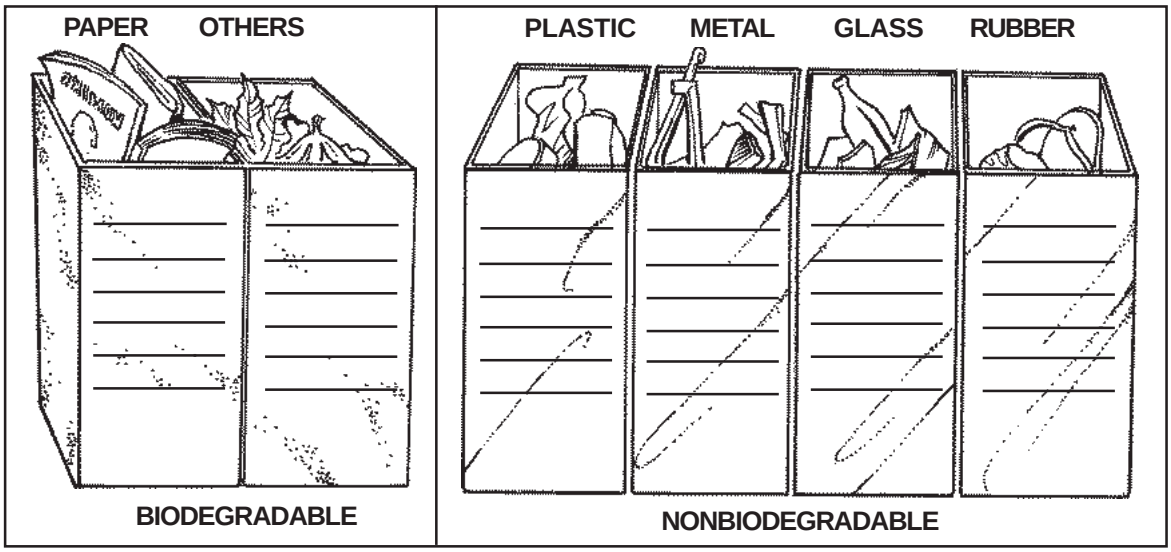
   b. It makes people get involved in community activities.

   c. It conserves time, money and effort.

   d. It reduces pollution.

II. Put the materials in the appropriate garbage box by writing them in the blanks in front of each box.

Used books
Fluorescent light bulb
Magazines
Roofing sheet
Leftover food
Tetrapack juice container



Check your answers using the *Answer Key* found on pages 37–38.

How did you do in the test?

If you got:

0	–	8	You should study this module again.
9	–	12	Go back to the parts of the module which you did not understand.
13	–	17	Good! But make sure that you go back to the items which you answered incorrectly.
18	–	21	Very good! You are well aware of our garbage problem and recycling as a solution to it.

Answer Key

A. Let's See What You Already Know *(pages 2–4)*

1. **(b)** The growth of population also multiplies the number of activities people do, thereby increasing the volume of wastes.

2. **(d)** The land used for open dump sites can be utilized for more productive purposes.

3. **(a)** Sorting out garbage will lessen the task of collectors in grouping waste materials which they will sell to different factories. These factories, in turn, recycle nonbiodegradable materials and use the biodegradable wastes as fertilizers or compost.

4. **(d)** Biodegradable materials decompose through time.

5. **(d)** Fish scales can be broken down completely.

6. **(c)** Burning and shredding destroy the material instead of recycling them.

7. **(a)** A recycling habit is a long-term solution to the garbage problem. Change in waste disposal practices should be accompanied by change in attitudes and beliefs.

8. **(a)** These are the practices involved in recycling. It basically means using materials over and over again.

9. **(c)** Landfills are open dump sites for garbage. Recycling reduces the need for these dump sites.

10. **(a)** Recycling of wastes in factories are meant to turn them into usable raw materials that can then be made into useful products again.

B. Lesson 2

Let's See What You Have Learned (page 15)

1. biodegradable - paper
2. nonbiodegradable - glass
3. nonbiodegradable - glass
4. nonbiodegradable - plastic
5. nonbiodegradable - rubber
6. nonbiodegradable - aluminum

C. Lesson 3

Let's See What You Have Learned (page 31)

Recycling is an example of sustainable practice. It allows materials to be used over and over again. This eliminates the need for added raw materials to create new products. This way, our environment—the source of raw materials—is protected from depletion.

D. What Have You Learned? *(pages 33–35)*

I. 1. **(d)** An increase in people's activities leads to the production of more wastes. Letters (a) and (c) cannot be pointed out as direct causes of our garbage problem.

2. **(d)** Pans are made of aluminum. The rest are all made of plastic.

3. **(d)** All the options are sustainable practices.

4. **(b)** The idea of recycling is to use and reuse materials for as long as you can. If and when they are disposed of, they can be recycled by machines in factories.

5. **(d)** With a little art, creativity and repairing, materials can be used over and over again.

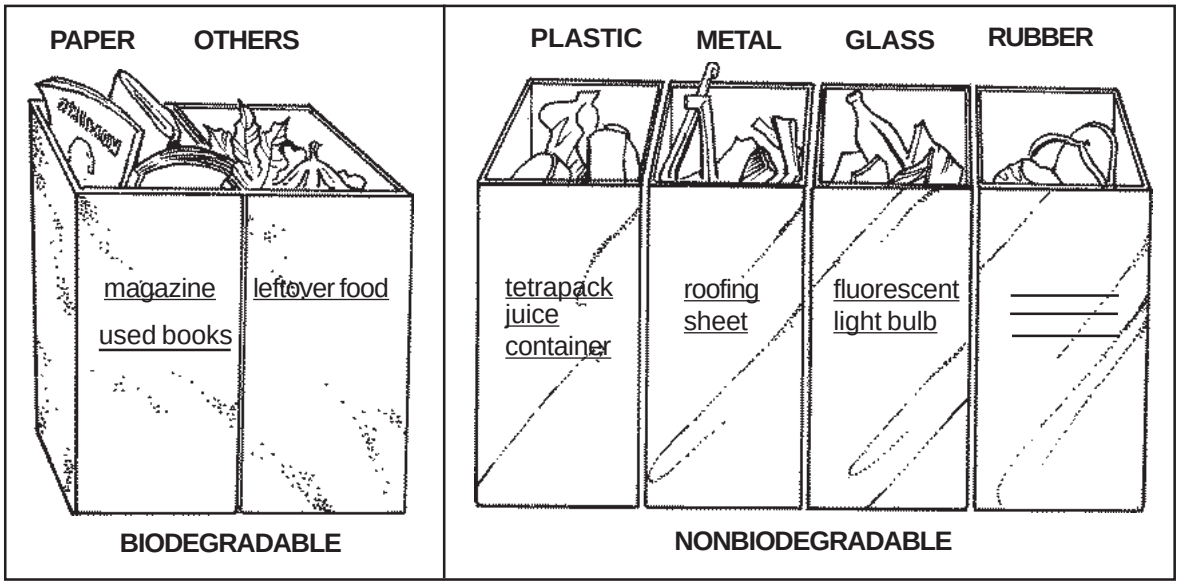
6. **(b)** The recycling symbol conveys a cycle. This means materials are used repeatedly.

7. **(d)** Biodegradable materials are referred to as such because they decompose completely while nonbiodegradable materials do not. (a) is incorrect because the terms biodegradable and non-biodegradable are only used for garbage. (c) is incorrect because both biodegradable and nonbiodegradable materials can be recycled. (b) is incorrect because both can burn, although nonbiodegradable materials will not completely burn.

8. **(c)** Garbage that is scattered can readily be a source of illnesses because of pests that live on it.

9. **(a)** Recycling strengthens values of thrift and conservation, not of courtesy and respect.

II. If you have properly identified whether the trash is biodegradable or nonbiodegradable, give yourself a point. Give yourself another point if you have properly segregated the trash based on the material that it is made of.



Glossary

Advocate A person who defends, maintains or upholds a certain cause

Biodegradable Refers to materials that can be broken down completely or can be decomposed through natural means. Examples are paper, phonebooks, animal wastes, leaves and leftover food

Nonbiodegradable Refers to materials that cannot be completely decomposed, even by burning. Examples are materials made of plastic, metal, glass and rubber.

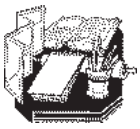
Recycling The process of using and reusing materials over and over again

Segregate To sort out or classify something, as for example the contents of your garbage

Sustainable practices Practices or activities that provide ongoing economic and social benefits without degrading the environment

Unsustainable practices Practices or activities that provide economic and social benefits but at the same time degrade the environment

Waste disposal The process of disposing of or throwing away waste or garbage



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