



BE AN ACE AT REDUCING WASTE

A Parent Resource for Teaching Young Children About Solid Waste Management



NESTLÉ IS WORKING TOWARDS A WASTE-FREE FUTURE



The quality of our environment largely determines the quality of our physical health and well-being, and solid waste management is certainly a pressing concern in environmental health. Let's look at some numbers from a study done by the World Bank (2018):

- An estimated 2.0 billion metric tons of waste was generated worldwide in 2018.
- It is estimated that by 2050 — a mere thirty years from now — 3.4 billion metric tons of waste will be generated worldwide.

OUR COMMITMENT

We at Nestlé believe that we all have a role to play in conserving our natural resources, protecting the environment, and reducing the amount of waste we generate. Nestlé is deeply committed to making our packaging 100% recyclable or reusable by 2025, as part of our vision that none of our packaging ends up as litter or in landfills.

To achieve this, Nestlé has been exploring multiple solutions in three core areas:

- Innovating to develop the **packaging** for the future;
- Helping to increase **collection, recovery and recycling of waste** in an effort to shape a waste-free future;
- Helping to drive **new behaviors and understanding** on the proper management of waste.

We recognize that we will not achieve our vision alone, and so this activity book was developed with the third core area in mind: recognizing the immeasurable potential of parents to influence the future behaviors of their children.

PARTNERING WITH PARENTS

Through the activities in this workbook, we hope to partner with you in training your children to:

- Think about how we **produce and consume** products, and its effects on the environment;
- Practice the 3Rs – **reduce, reuse and recycle** – consistently, and urge others to do the same;
- Be more **mindful about the waste** we generate and how to manage that waste properly.

Since a significant source of solid waste is generated in homes, we hope that these modules will influence members of your family to feel a personal responsibility for proper waste management within your own homes.

Let's come together to shape a waste-free future and be a *kasambuhay* for the environment!

Nestlé Philippines, Inc.

Our Panel of Experts and Module Developers

These materials were developed by Nestlé Philippines under the guidance of Corporate Affairs Executive and Head of Nestlé's Plastics Task Force, Misha Rabat, and experts from multiple sectors, with the endorsement of the National Solid Waste Management Commission of the Office of the President. This module is a condensed version of the Solid Waste Management Module created for schools under the Wellness Campus program, in partnership with the Department of Education. Our team of content and material developers included the following:

Commissioner Crispian Lao is the Founding President of the Philippine Alliance for Recycling and Material Sustainability (PARMS) and is the Private Sector Representative from the Recycling Industry Sector of the National Solid Waste Management Commission.

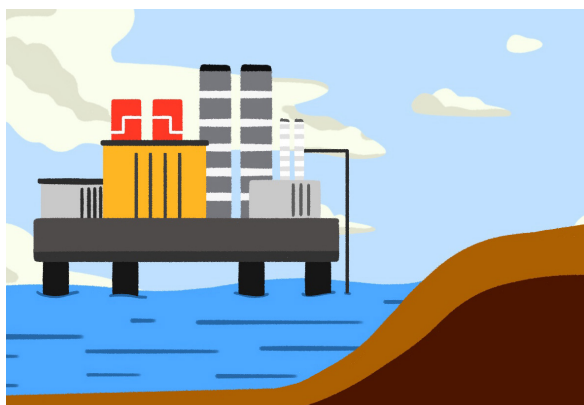
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Film-maker, author and Komiket Co-Founder Paolo Herras and his creative team at Komiket were engaged to develop cartoon characters and illustrated stories that make our materials more appealing to young learners, helping them visualize the attitudes and behaviors our modules aimed to develop.

Dedet Reyes Panabi has been a writer and editor for over 25 years. She was editor-in-chief of Working Mom Magazine, and worked for digital marketing agencies in Singapore, Canada and Australia.

Completing the team is graphic designer, Jake Ruiz, with more than 10 years of experience in graphic design, as well as 8 years in teaching visual communication.

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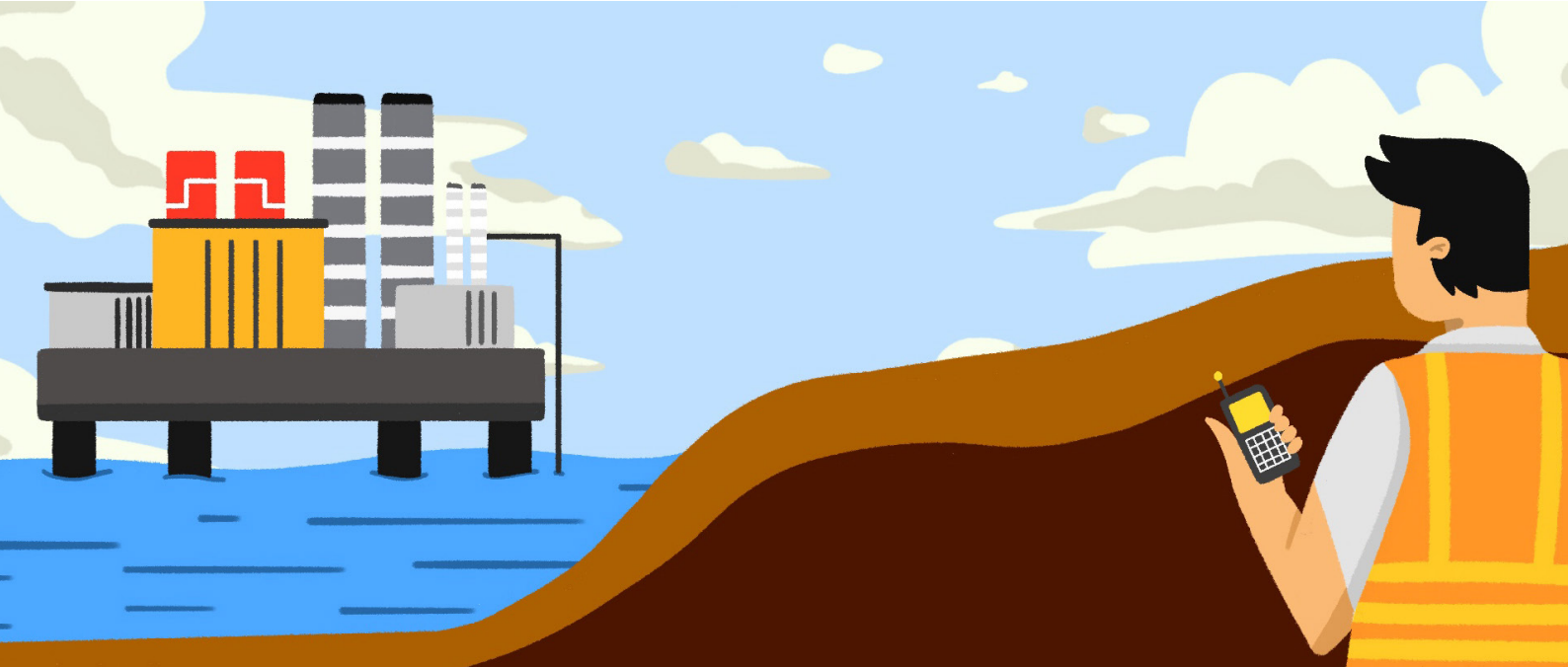
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WHERE IN THE WORLD DO THEY COME FROM?

This lesson aims to teach your child the following:

- We use many different products every day that come from the Earth's natural resources.
- Irresponsible use of natural resources can cause problems to our environment, such as pollution or destruction of animal habitats.
- Some natural resources are limited, and if we use up too many resources too quickly, we might not have enough in the future.
- We need to be more mindful about what we buy, use and throw away in order to protect our environment.

By the end of this lesson, your child shall be able to:

- Describe where some products come from and how their production impacts our natural resources and environment.
- Describe ways to be more mindful about consumption of products in order to save natural resources.

The many different products that we use every day are made using the Earth's natural resources.

What are some products that we use in our home every day?

From trees, we get products like paper and wood for furniture. From plants and animals, we get food and cotton clothing. What items do you see here, and where do they come from?



ANSWERS

From trees and plants:

- toilet paper, yellow pad and notebook
- cotton shirt and socks
- fruits and vegetables
- bayong bag

From animals:

- meat and eggs
- leather bag and shoes

Some items are made from materials that we need to dig up from the ground to make into metal, glass or plastic. Can you name which of these items are made of metal, which are made of plastic, and which are made of glass?



ANSWERS

Metal:

- aluminum can
- nuts and bolts
- spoon and fork

Glass:

- drinking glass
- jar
- bowl

Plastic:

- shampoo bottle
- food container
- spoon and fork

WHAT WILL HAPPEN IF WE DON'T TAKE CARE OF OUR ENVIRONMENT?



We need to be careful with the way we get natural resources from the environment, to avoid problems such as pollution of land, water and air, or the destruction of animals' homes.

We also need to be responsible with how we use what we get from the environment. If we use up too many natural resources too quickly, we might not have enough in the future.



And not only that, we have limited space to dump our waste. We must choose where and how we dump our waste so that we do not harm our health or our environment.



RESOURCES FROM THE EARTH

Use this clay demonstration to help your child visualize what would happen if we keep taking resources from the environment.

1. Begin your demonstration with this script:

“The things we use every day come from natural resources in our environment. Let’s pretend that the clay represents different materials that we get from natural resources.”

- *[Hold up a piece of brown clay.]* “Let’s pretend the brown pieces are WOOD.”
- *[Hold up a blue piece.]* “Let’s pretend the blue pieces represent PLASTIC.”
- *[Hold up a white piece.]* “The white pieces represent GLASS.”
- *[Hold up a grey piece.]* “The grey pieces represent METAL.”

NOTE TO PARENT

Feel free to change the colors of the clay based on what colors are available to you.

2. Pick up a brown piece of clay and ask your child to name an item made of wood. Make a clay figure of that item, and place it back on the tray.
3. Next, pick up a piece of blue clay and ask your child to name an item made of plastic. Again, make a clay figure, and place it on the tray.
4. Do the same with a piece of white clay (representing glass) and a piece of grey clay (representing metal).
5. At this point, you should have four different clay figures — representing items made of wood, plastic, glass and metal — on the tray. Instruct your child to name more items used every day, and identify the material used to make each one. Form figures of that item, or ask your child to make it for you.

Eventually you will run out of pieces of clay. Point out that if we keep taking resources from the Earth without replacing them, we might someday run out of the resources that give us wood, plastic, glass or metal.

BRING ME

Here’s another activity to help your child realize that most of our day-to-day needs depend on items that come from natural resources, so we should consume resources wisely.

1. Have your child bring you items made from each category:

- Trees, plants or animals
- Plastic
- Glass
- Metal

2. With each item brought to you, ask your child what would happen if we ran out of materials to make that item. For example, if your child brings you a piece of paper for the Trees/Plants/Animals category, ask: “What would happen if we ran out of trees and we couldn’t make any more paper?” (*Possible answer: We would not be able to produce notebooks, pad paper, books and other things that are used for learning.*)

If your child brings you a plastic food container, ask: “What would happen if we ran out of materials to make plastic and we could not make containers such as this one?” (*Possible answer: We would need to find another way to store food or keep our baon safe.*)

By asking such questions, you help your child realize that our day-to-day needs for food, shelter, health, safety, learning and recreation all depend on items that ultimately come from natural resources. Remind your child that we should not overconsume so that we do not run out of what we need for our survival and convenience.

AVOID WASTE

Think Before You Buy



Even before we buy a product, we need to think about how it will impact our environment. For example, we can ask ourselves, “Do I really need it? Is it important?”

We can also ask ourselves, “Instead of buying this new item, do I have something at home that I can use instead?” Or maybe you can ask your family or friends if they have that item.



What are some examples of items you can ask your family and friends to allow you to use, rather than buying a brand new item?

Some examples are:

- formal attire
- tools
- books
- sports equipment
- suitcase



Rather than buying a brand-new item, check if the old item can still be repaired. Can you give some examples?

Possible answers include:

- slightly damaged shoes and bags
- radio
- lamp
- household appliances

If we are mindful of the things we buy, we use less natural resources to make new products and avoid getting things that eventually end up as trash.

Waste Management Hierarchy



Avoiding waste should be our priority.

If we cannot avoid waste, then we should practice the 3R's of **Reduce, Reuse and Recycle** to save our environment and lessen the waste that ends up in a landfill.



AVOID THE DUMP

1. Go around your house with your child and collect items that are slightly damaged.
2. Place the items on the floor to represent that they were “thrown away.” Tell your child that this pile is like an open dumpsite.
3. Ask your child what will happen if everyone in the neighborhood or school brought their damaged items and placed them on this floor. (*Expected answer: We will eventually run out of space. Our house will be filled with damaged items.*)
4. Explain to your child if we keep throwing away our damaged items, we will need to take more resources from the Earth to replace the ones we throw away. We will not only run out of resources, but we may run out of space to dump our trash.
5. Retrieve some sample items from the floor.
 - **Identify items that are not essential.** Explain that if we avoid buying unnecessary items in the first place, we produce less trash.
 - **Identify items that can be borrowed or repaired instead of purchasing brand new ones.** Again, explain that is another way to avoid having items end up as trash.
6. Ask your child to identify other items that could have avoided ending up in the pile. Emphasize how the pile represents how the volume of trash in a dumpsite can also be lessened as we avoid purchasing unnecessary products.





REDUCE REUSE and RECYCLE

This lesson aims to teach your child the following:

- Practical ways to REDUCE our waste.
- Practical ways to REUSE and RECYCLE items.

By the end of this lesson, your child shall be able to:

- Identify items that can be reduced, reused or recycled.
- Explain how practicing the 3R's (Reduce, Reuse and Recycle) can help save the environment.



Upsize and
buy in bulk



REDUCE

One way we can save natural resources and protect our environment is to **REDUCE** the amount of waste we generate. One way to reduce our waste is to buy products in larger sizes rather than smaller packages. **How does this help to save the environment?** It takes longer to use up a product that we buy in bulk and this reduces the amount of packaging that is used up.

REUSE

Another way to save the environment is to **REUSE** items. We look for ways that items can be used over and over instead of just throwing them away.

For example, **when we have clothes, decorations, and household items that we no longer want to use, what should we do with them?** We could donate them so that someone else can reuse these items, instead of just throwing them away.

Donate old
items



Sometimes, **REDUCE** and **REUSE** go together! When you go to the grocery with your parents and you reuse an eco bag or bayong, you reduce the number of plastic or paper bags consumed.



RECYCLE

Last but not least, we **RECYCLE**. To recycle means to convert something that would ordinarily be thrown away into something useful.

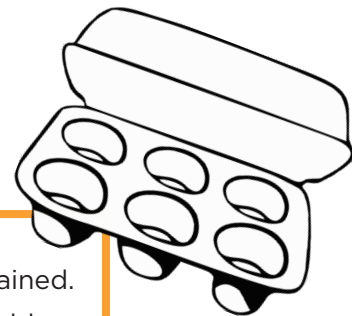
What are examples of items we can recycle?

Bring recyclables to
recycling centers



FIND A NEW USE

1. Hold up a glass jar and tell your child what product that jar originally contained.
2. Ask your child: "Now that we have used up the product inside this jar, should we throw the jar away?" Allow your child to freely share and explain his answers.
3. Remind your child that if we keep throwing things away, we will soon run out of space to keep our trash.
4. Explain that a better way would be to find different uses for the jar. Ask your child, "What are different ways that we can reuse this container?" (*Possible answers include: to store other food, to store small items like paper clips or erasers, to use for plants*)
5. Give your child the glass jar, as well as an egg carton and a shoebox (if available). Challenge your child to find different uses for these items.
6. Provide art materials that your child can use to decorate the items.



What are other objects that can be reused or recycled to lessen the waste that ends up in landfills? List down as many as you can think of below.

Objects that I can Reuse or Recycle to Save the Environment

Reuse

Recycle



STORY TIME!

3R'S FOR THE EARTH



The first important step to help save our planet is to **REDUCE**. Before you start buying new things, **First take a pause and think:**

Do I really need it?

Do I already have this at home?

Can I just borrow this from someone else?

Will I use this Once or a lot?

Will this just end up as waste?

When you go to the supermarket, buy products in bulk rather than in smaller packages. Buying in bulk lasts longer and uses less amounts of packaging.



"Let's remove what you don't use. Everything you no longer use goes in this bag."



"These shoes are broken. Throw them away!" Patty Patapon says.

"No Patty Patapon, these used shoes can still be REUSED."

Just a little stitch here and a little glue there, it's almost good as new." says Red.

You can also donate your shoes instead of throwing them away. Another way you can save the planet is to REUSE.





FIND THE RIGHT PLACE FOR OUR WASTE

This lesson aims to teach your child the following:

- Waste can be segregated into BIODEGRADABLE and NON-BIODEGRADABLE waste.
- Biodegradable waste can be further segregated into waste that can be used as a) animal feed or b) compost.
- Non-biodegradable waste can be segregated into a) items that can be recycled and b) residual waste (i.e. items that have no value and are not accepted or purchased by Material Recovery Facilities and Junk Shops).
- Carefully segregating biodegradable from non-biodegradable waste helps generate the best value for the waste and manage their proper disposal, which in turn protects our environment.

By the end of this lesson, your child shall be able to:

- Classify waste into biodegradable and non-biodegradable.
- Identify the proper means of disposal for biodegradable and non-biodegradable waste, and do basic waste segregation.

We should remind our family members and friends to reduce waste and use products that can be reused or recycled. But even though we try our best to reduce waste, and reuse and recycle items, we will still generate waste, so we need to remember...



Don't litter.

When we litter, our trash collectors have a harder time gathering the trash to put them in the right place.

Segregate trash.

In order to properly manage our waste, we need to know its classification. The waste that we generate can be classified as **biodegradable** (*nabubulok*) or **non-biodegradable** (*hindi nabubulok*).



Which of these are biodegradable and which are not? Circle the ones that you think are biodegradable, and later, check if you are correct.



It is important to know whether something is biodegradable or non-biodegradable, because it affects how we dispose of these items.

Biodegradable wastes can be broken down by microorganisms, such as leftover food or plant waste. Biodegradable wastes can be used as compost for gardens or to feed animals.

Non-biodegradable wastes cannot be broken down by microorganisms, and these can stay on the Earth for thousands of years.

Biodegradable



Non-biodegradable



Separate the biodegradable waste that causes garbage to smell bad. When biodegradable waste contaminates other materials, it makes it harder to reuse or recycle the other materials.



The first thing we should do is to separate the biodegradable waste. That's important because this is what causes garbage to smell bad. When these items come into contact with other materials, it makes it much harder for us to reuse or recycle other materials.

We can set aside the kitchen waste that can be fed to animals. We can also turn biodegradable waste into compost, which is used as soil conditioners or fertilizer for gardens. Fertilizers help plants to grow.

Finish your food.

Finishing your food reduces the food waste that gets thrown into the garbage bins. So, one way to reduce the garbage that we generate is by not wasting food.



Bring paper, glass and metal to recycling centers.

These are examples of **Recyclable Waste**. You can give recyclable items to waste pickers, junk shops, or our trash collectors who can bring them to recycling centers. Recycling centers process these items so that they can be used again.



We can help out trash collectors by making sure these items are emptied, cleaned and dried before handing the items to them.



Now, imagine if the dry newspapers came into contact with your kitchen waste. Will our junk shops be able to send the newspapers to recycling centers to be used again?

If the newspaper is too soiled, then we would not be able to recycle it. Don't throw clean, dry paper away in the same trash can as other types of waste.



These are examples of **Residual Waste**. These either have no value or are too soiled and oily. This also includes paper that has come into contact with food.



There are some types of residual waste that can be cleaned up and potentially be recycled. These include items like sachets and beverage cartons. Check to see if there are recyclers or collection points near your area.

FIND THE RIGHT PLACE FOR OUR WASTE

We usually see these trash cans in public areas, like the mall or the park.
Now you know where to throw your trash!

Biodegradable

This is for food waste without the wrappers or container.



Recyclable

This is for dry items
that can be recycled.



Residual

This is for items that are oily, soiled or have come into contact with food.



DIRECTIONS

Put an X on the items that are in the wrong trash can.

Biodegradable



Recyclable



Residual



(See answers at the bottom of the next page.)

DIRECTIONS

Throughout the following week, keep a log of the items that you and your family members throw away at home. You can ask the help of your parents, guardians, or an older sibling to list down the waste items you see in your trash cans. Do NOT touch the waste items, just look inside the trash cans at the end of the day and list down as many items as you can see. Then list down the items, using the following color code:

- GREEN INK - for biodegradable trash
- BLUE INK - for recyclable trash
- BLACK INK - for residual trash

Trash Log

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday

Answers to the trash can activity on page 20:

- Biodegradable trash can: ketchup sachet, tin can, and glass jar should be marked with an X.
- Recyclable trash can: coated food box with food waste, pandesal and banana peel should be marked with an X.
- Residual trash can: glass jar and plastic bottle should be marked with an X.