Learning about

Waste

An Activity Guide

Authors
Brinda Dewan
Sanjeevani Yonzon Shrestha

Nepal Prakriti Pathshala Creative Team
Ritu Gurung KC
Nabin Baidya
Subash Chandra Kharel
Rajeshwar Rijal
Keshab Shrestha
Mohan Bikram Shrestha

Photo Credit
Sanjeevani Y. Shrestha, Om. P. Yadav, Ujjwal Bhattarai, Leonardo Mantovani, Parakram S. Yonzon, Tekendra Limbu, Nima Bhutia, Laxmi P. Ngakhushi, Gaurav D. Khadka, Deepesh Bista, Bijay Gajmer

Illustrations
Abin Shrestha

If you require our help, advice regarding any activities, ideas to improve environment within school, to establish nature clubs or just revive old ones or if you just want to share your stories, please contact:

Nepal Prakriti Pathshala
Wildlife Conservation Nepal
PO Box No 13781
Kathmandu Nepal
Or write to us at
mail@wcn.org.np

ISBN: 2-8805-7
Printed: 2015

Foreword

Government of Nepal
Ministry of Education
Curriculum Development Centre

Ref

Foreword

Natural Resources form the foundation of Nepal's development and we must utilize them in a sustainable way. We must give priority to how we educate our children to value our natural heritage. For Curriculum Development Center, Environment Education is one of the most important subjects. We are happy that Nepal Prakriti Pathshala, an initiative of Wildlife Conservation Nepal and Danish Forestry Extension has been contributing to strengthen Environment Education in Nepal. Its approach that integrates hands-on experience methods with classroom teaching is innovative.

We appreciate the efforts of Nepal Prakriti Pathshala to bring out this series of teacher guides, tested by environment science teachers around Nepal, which complement the government's curriculum in Environment Science and also help the students to become more aware of their environment.

I am certain that this manual **Learning about Waste-An Activity Guide** will help teachers in instigating children not only to care for the environment but also learn different methods in which they can be a part of solution for local environmental problems. I hope this will help motivate the teachers and the students together to be agents of change in the society.

Diwakar Dhungel
Executive Director

Diwakar Dhungel
Executive Director

Note to the Teacher

Learning About Waste- An Activity Guide is designed for teachers of grades 3-8 to help provide concept on waste, how it is produced and common methods of managing solid waste to their students. It also includes information about hazardous waste and e-waste.

This guide provides hands-on lessons and activities related to preventing and reducing waste including recycling, reusing and composting. These lessons encourage students to utilize observation skills, problem-solving skills and analytical thinking.

The main aim of this Activity Guide is to make waste education interesting, fun and inspire teachers and children to bring positive environmental changes in their home, school, and community. This Manual has been tested and improved by Nepal Prakriti Pathshala (NPP) over many sessions with Teachers, Nature Interpreters and Environment Educators of Nepal and Denmark. NPP is a joint program of Wildlife Conservation Nepal and Danish Forestry Extension that is continuously working to make environment education more fun, hands-on and outdoor based in Nepal in order to inculcate the values of sustainable living and conservation.

Please help us improve this guide by providing us with constructive suggestions. We look forward to making environment education more effective with your help and support.

Nepal Prakriti Pathshala

Content

1. What is waste? 1
2. What is in my garbage? 3
3. Where does it go? 7
5. Hazardous Waste, what is it? 9
5. What is E-waste? 11
6. What can we do? 13
7. How Green is my community? 25

The world we live in
is like this...

But our world is also
like this...

To have beautiful nature and healthy environment
around us, you and I both need to do some things...

Do you want to learn them?

If Yes then lets begin...

1.What Is Waste?

Waste is the name given to everything that we throw away. We do not want to think or deal with it. Waste products created by natural processes or organisms like feacal matter and dead bodies are usually decayed in nature. Such wastes are known as Degradable Waste. This way in nature, recyling of watses occurs through decomposition and keeps the environment well balanced.

On the other hand, man-made products like plastics are hard to decompose and takes hundreds of years. They cannot be burned and if they are, then they are highly destructive to the environment. Such waste is known as Non-Degradable Waste.

Waste produced by man is one of the most serious environmental problem which is also an indication that materials are not being used efficiently. Valuable resources are being lost during waste disposal and to make new products more resources are being extracted which further damages the ecosystems.

Think about all of the things that you "use" in a day. What do you do with the things when you have finished using them and why. For example, when you are done eating an apple, what do you do with the core? What do you do with the empty water bottle when you are finished drinking the water? What about clothing that does not fit anymore? They all become waste.Thus it is important that we reduce our waste as much as possible which not only help us to make our environment clean but also helps conserve natural resources. Wastes dumped improperly often cause diseases and unaesthetic environment.

Activity 1.1: Garbage Walk

What will they learn:
In this lesson children will investigate how much trash they produce and differentiate between degradable and non-degradable waste, and learn about the foundation for waste management.

Materials
- Big cloth/jute bags for garbage collection
- 2 big dustbins
- Gloves
- Labels for the 2 bins (degradable, non-degradable)

Activity Time:1-2 hours

Lets Get Started:
- Take a walk around the school premises with the children and collect all the garbage lying around the area.
- Bring it back to the class and place the garbage you have collected on the floor.
- After discussing with the children, segregate the collected waste into degradable and non-degradable waste.
- Prepare 2 dustbins for these two types of waste and label them as degradable waste and non-degradable waste.
- Dispose the collected garbage in their proper bins.
- Discuss what happens if we keep on piling up waste and not manage it properly.

2. What Is In My Garbage?

Waste does not exist in nature. In nature, everything has its purpose. We buy and use more things than we actually need and create waste in the process but never think about the long term harmful effects it causes for us and the environment.

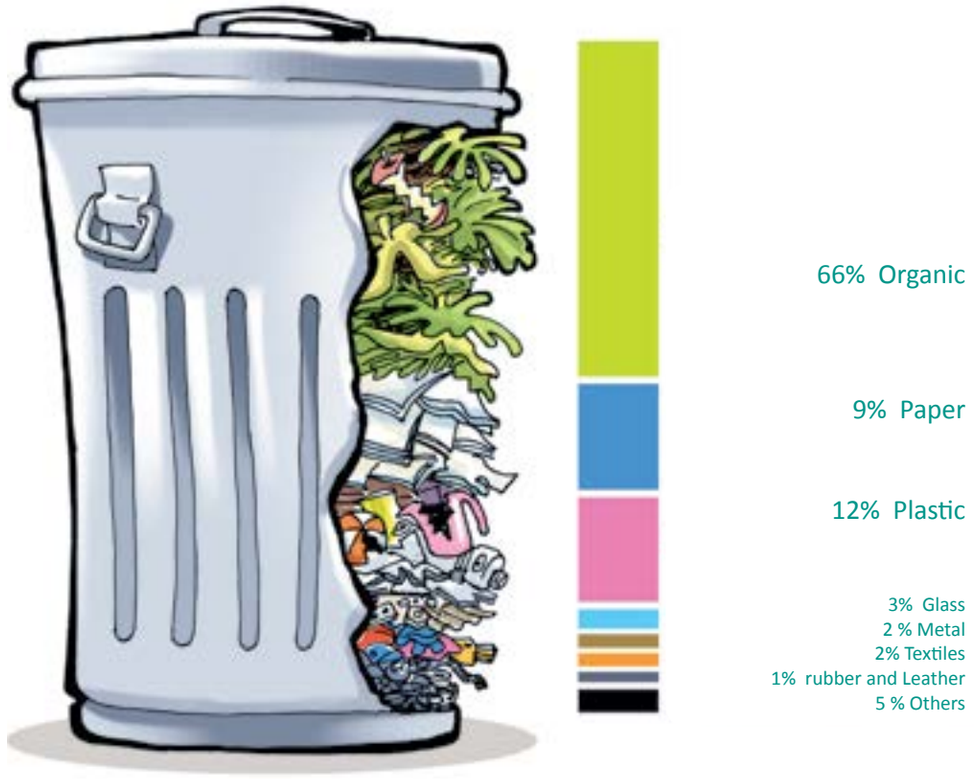
Waste is entirely man-made and is created when raw materials are mined from the earth. When raw materials are converted to new products, during its transportation to us and ultimately when we throw them away they become waste. It comes from us and our homes, schools, businesses, hospitals, industrial factories, from construction and demolition sites. An average Nepali creates 170 g of waste per day but this number will go on increasing as our demands increase.

As we have now understood that some wastes do not decompose, many of them can be used again.

Non-biodegradable waste can be further segregated into:

a. Reusable waste – plastics, paper, glass, metal, etc.
b. Toxic waste – old medicines, paints, chemicals, bulbs, spray cans, fertilizers, pesticides, old batteries, shoe polish, etc.

In Nepal, household waste comprise mostly of bio-degradable waste. However this is gradually changing with the use of more packaged products at homes in recent times. This habit of using more plastics in our everyday lives needs to be discouraged. The composition of an average Nepali household waste is as follows: organic waste 66%, plastics 9%, paper and paper products 12%, glass 3%, metals 2%, textiles 2%, rubber and leather 1%, and others 5%.



Average Composition of Nepali Household Waste

Source: ADB 2013

Activity 2.1: Trash Audit - Weigh Your Waste

What will they learn:
Children will be able to identify components of their weekly "garbage", understand that everyone generates waste. They will also understand that a little effort we make adds up to a big reduction in the amount of garbage made.

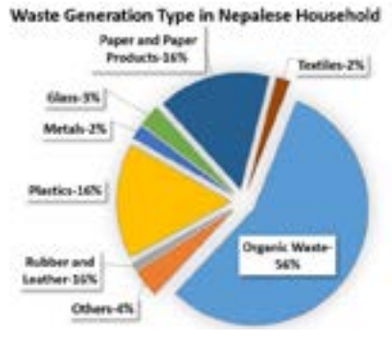
Materials
- Five to seven cloth/jute bags for garbage collection (depending on the number of school days in a week)
- One big plastic sheet/tarp
- One set of gloves per child
- Weighing scale
- Clear tape

Activity Time:1-2 hours for 1 week

Lets Get Started:
- Distribute the garbage bag each day to the children and ask them to collect all the "dry" garbage they throw away. Ask them to include all their paper waste and packaging but not to include food waste or any other type of "wet" trash that might decompose. Have the children put on gloves for health reasons.
- As a safety precaution, children must be instructed not to collect sharp/glass items.
- At a designated storage space, the collected garbage bag must be stored each day. Children can use a thread to tie the bags.
- Determine the average weight of trash generated per day (A Guessing Game about the weight can also be done. The child closest to the actual weight can be declared as a winner).
- Bring in the plastic sheet/tarp and spread it on the floor. Let the children spread the contents of the trash bag on the tarp and sort the garbage into as many categories as possible: plastics, aluminum, paper, steel, and mixed materials (those that fit into more than one category). Ask them to record the contents of their garbage piles.
- Discuss what types of waste we should reduce to help the environment.

Activity 2.2: Garbage Pie

What will they learn:
Children will construct a pie that represents the percentage of materials thrown away in our garbage each day. Children will describe the composition of waste, identify items within each category and the amount of each component.



Materials
- Cardboard
- Glue
- "Trash" from activity 2.1

Activity Time:1-2 hours

Lets Get Started:
- Using the trash from the previous activity, divide the trash with gloved hands into different piles, one for each "slice" of the pie eg. paper, glass, plastic, food waste, metal, etc. For messy items like food scraps or heavy items like glass, pictures from old magazines can also be used.
- The portions for each slice of the pie can be divided through visual estimation. All the sections of the pie should add to form a circle and amount to a 100%.
- The pie chart can be made mathematically by older children while younger children make the chart with the help of elders.

Make the Pie
- Start with the large cardboard circle. This will be the base of your pie.
- Use a pencil and ruler to draw the slices of pie to match the slices on the pie chart. Then label the slices on your pie like this: paper 34%, glass 5% etc. When you're finished you should have one slice of pie for each type of trash.
- Glue or tape samples of each type of trash onto your pie slices. Try to find at least one topping for each slice of pie.

Ready to Serve
- Don't eat your pie! Instead, show it to your friends and family so they understand what kind of trash we throw away every day and how every one can contribute to decrease harmful wastes like plastics.

3. Where Does It Go?

Waste becomes a problem because of the huge amounts of it being produced. We usually bury, burn or dump our waste. We have been doing these for hundreds of years. Many of us dispose our waste within our compound either by traditional composting, open burning or throwing waste in the surrounding open spaces. Garbage left in streets and along riverbanks is a significant problem in Nepal and poses health problems to local residents.

Waste collected from some residential and commercial areas in urban areas ends up in a landfill, a huge hole in the ground commonly known as a garbage dump. Landfills use up precious space and are so ugly and smelly that no community wants to live near them. Transporting trash to distant landfills is troublesome and expensive. Most of the garbage we have sent to landfills in our lifetime is still there. It does not go "away" or disappear. Door-to-door collection and landfilling have not yet been introduced in most rural areas.

Burning garbage creates waste products causing pollution. The best solution to waste problem in the world is actually to produce less waste. To solve this problem, each community must look at all the possible solutions and make a good waste management plans.

Activity 3.1: Lets Rot Them - How Long Does It Take To Decompose?

What will they learn

Chlidren will learn that different materials decompose at different rates.

Materials

- Big Plastic container filled half with soil
- String
- Labels
- Test items
  * Apple core
  * Banana peel
  * Chips/noodle packets
  * Leaves
  * Old woolen sock
  * Plastic bottle
  * Glass bottle
  * Chewing gum
  * Aluminum can
  * Old battery
  * Newspaper

Activity Time:1hours per week for 1 month

Lets Get Started:

- Collect materials from the test item listed above with the children
- Label each item – attach it to a piece of string with the label at the other end.
- Place all the items in the container and cover them completely with soil (make sure the labels are not buried).
- Keep the soil moist by sprinkling water from time to time. This will help the the items to decay.
- Ask the students to predict which item will decay first and which will decay last.
- Observe what happens to each item once a week over a period of one month. The child closest to the actual dacay rate can be declared as a winner.
- Discuss why some things decompose quicker than others.

4. Hazardous Waste, What Is It?

A hazardous waste is a waste that is either toxic (poisonous), catches fire, corrodes other materials or reacts with other chemicals. Hazardous waste presents immediate or long-term risks to humans, animals, plants and the environment. Hazardous wastes can pollute the land. They can even pollute water that is underneath it.

Hazardous wastes are produced while making useful items for us such as medicines, paper, computers, jewelery, insect sprays, paint, cars and other products.

If you think industry is the only source of hazardous waste, you may be surprised to know that there is hazardous household waste as well. Do you use any of the following items? Kerosene, batteries, bulbs, paints and nail polish removers, pesticides, herbicides, other garden products and household cleaning products. These are all examples of hazardous waste coming from your household.

So, what can we do about hazardous wastes that come from these products? It requires special handling either by detoxification or safe disposal. Government usually have special plans for management of hazardous wastes.

Activity 4.1: How Our Water Gets Contaminated

What will they learn:

Children will understand how ground water can become contaminated, and how careless use and disposal of hazardous waste above the ground can potentially end up in the water stored naturally below the ground.

Materials

- 2 Plastic soft drink bottles with the bottom cut off
- Soil, sand, gravel, rock
- Two glasses
- Food color or one water color or ink
- 2 jars of water

Activity Time: 1hour

Lets Get Started:

- Place the two cut out bottles upside down in the glasses and fill them layer by layer with rock, pebbles, gravel, sand and the top with soil.
- In one jar mix some soil with water to make a dirty water solution. In another jar add some color to the water to make a color solution representing chemically contaminated water
- In one bottle slowly pour the dirty water and watch the soil absorb the water. Continue dropping water onto the bottle until it starts trickling through the bottom.
- In the second bottle pour the colored solution till water trickles out from the bottom.
- Observe the color of the water coming out from the bottom of each bottle
- The water coming out from the bottle with the soil solution is relatively clean compared to the water poured from the top which shows that the different layers of soil, sand, gravel and rock help clean the water as it flows down. However, the color of the water trickling out from the bottle with colored solution is same as when poured from the top. This shows that chemically polluted water may not be cleaned by the soil layers and this is how pollution spreads and can get into our naturally stored reserves of water. Discuss.

5.What Is E-waste?

Discarded electronics–generally referred to as electronic waste or 'e-waste'. It includes our electronic waste items such as old television sets, tape recorders, computers, refrigerators, CDs, DVDs and DVD players, video games and cell phones that we throw away.

An electronic product may contain more than 1,000 different substances, some of which can be harmful to human and environmental health if dumped improperly. If old equipments are not properly disposed, these substances could get into the air, soil and water and pollute them.

As most e-waste handlers do not have essential technology, e-waste usually ends up in landfills. In landfills, chemicals from e-waste gradually pollute the soil and groundwater.

Selling or donating electronic items is a good way of managing e-waste. This extends the life of the product and makes it available to others who can still use it. However, if the equipment is beyond its useful life, they can be dismantled and their parts can be recycled to get different materials like plastic, metal and glass. These products can be reused to make new products.

Recent solutions have come from designers who plan to use environmentally safe raw materials to make electronic goods. But the best way to reduce e-waste is minimal use of electronic items as possible.

Together, we can make a difference in the fight against e-waste!

Activity 5.1: Know Your E-Waste

What will they learn:
Children will be able to assess different types of household electronic products, their lifespan, how they are disposed and possibilities of recycling them.

Materials

- Pen
- A copy of the Electronic Inventory Worksheet

Activity Time: 1hour

Lets Get Started:

- Ask the children to make an inventory of the electronic items in their household, noting down all electronic items from TV sets and computer to calculator and mobile phone charger.
- With the help of an adult they can estimate the life span and replacability of each item in their homes (eg: TV sets can be used for 5-10 years in most homes while mobile phones are replaced every few years).
- They should also note down how each item can be recycled or reused (eg: donated, repaired, etc). For this they have to do a little more research from the library and Internet.
- Discuss how we can minimize our e-waste.

Electronic Inventory

ELECTRONIC ITEM	LIFE EXPECTANCY	RECYCLABLE/REUSABLE

6. What Can We Do?

Reduce, Reuse, Recycle

Proper waste management follows the "three Rs" principle. The "three Rs" are Reduce, Reuse & Recycle and they are most important ways to prevent our trash from harming the Earth's environment.

So what are these 3 Rs?

Reduce: The most effective way of managing waste is not producing it in the first place. By buying things with less packaging we save things from being thrown out and reduce the quantity of waste produced. We can produce less waste by not buying things that we do not actually need.

Reuse: Reusing things again also helps reduce waste production. For example using jam containers to store other food items, taking your used goods like old furniture, clothes, tires, appliances to someone else are good examples of reuse.

Recycle: It is the collection and processing of materials that would otherwise be thrown away as trash and turning them into new products. For instance, recycled newspaper can be made into paper bags, egg cartons, or cardboard. Glass and aluminum from drink containers can be made into new containers. Used cooking oils can be made into bio-fuels and plastic bottles into water pipes.

Reduce

Activity 6.1: Pack It Up

What will they learn:

Children will understand why some packaging is necessary and identify unwanted packaging.

Materials

- Banana
- Apple
- Coconut
- Juice can
- Ice-cream container
- Paper bag
- Chocolate wrapper
- Fast food wrapper
- Juice box
- Plastic around magazines
- Envelopes from bulk mail

Activity Time: 1 hour

Lets Get Started:

- Ask children to bring in different examples of packaging from the list above.
- Have them examine the items and discuss the packaging. Does the packaging offer protection, provide advertisement, make it convenient for the buyer, or make the product just more appealing?
- Is the packaging essential or wasteful? Why or why not? Could the item be packaged in a less wasteful way? What influence do the children think the packaging has on how well the product sells?
- Ask the children to classify each of the packaging examples as natural (bananas), recyclable (juice cans) or non-recyclable. Discuss what happens to the packaging once the product is used.

Reuse

Activity 6.2: Make A Photo Frame With Old Magazines

What will they learn:
Children will learn how to reuse old newspaper to make a fun photo frame.

Materials

- Old newspapers/magazines
- Cardboard of desired size
- Scissors
- Glue
- Paint and brush

Activity Time: 2 hours

Lets Get Started:

Make magazine sticks

- First, tear out a pile of magazine pages. You don't have to worry about the torn edges being too clean—they'll be hidden when you roll up the sticks.
- Beginning at a corner, roll the paper from the cut edge of the paper, not the torn edge.
- Once you've rolled the paper to this point, spread some glue along the top edge of the paper, about halfway across from the right-hand corner. Then continue rolling the stick over this glue. Finish rolling up the stick, making sure that the last tip of paper is securely glued down.
- Make a pile of sticks to get ready for the next part of the project. The frame requires about 30 sticks. Once you've rolled a few sticks, you'll find a rhythm and each one will take only a few seconds to make.



Making the frame

- Measure and cut the cardboard to the desired size, two or three inches longer and wider than the photograph
- Cut a hole in the middle of the cardboard where your photograph will show through
- Apply generous amount of glue on the cardboard and place the sticks into the glue, carefully pressing them together and adjusting their position. Let them sit for about five minutes while the glue sets. You can place your sticks in any design you like, and the possibilities are endless
- The sticks should sit as close together as possible. Press the sticks together as your work. If glue oozes out between them, just wipe it away.



- When you've covered the entire frame with the sticks leave it to dry.
- Once the glue is dry, use a pair scissors to trim away the ends of the sticks so they are in line with the edge of the frame. You can also cut the sticks to size before you glue them in place.
- If you like, you can finish the cut edges of the sticks by gluing another stick over them. You'll need to hold these sticks in place for a few minutes while the glue sets.
- Cut a cardboard to the size of your frame. This will be the back side of your frame.
- Stick the frame to the cardboard on three sides leaving one side open to slip your photograph.
- Paint your frame in the desired color. You can even paint the rolls first and then glue them to the cardboard.



Recycling

Activity 6.3: Let's Make Our Own Paper

What will they learn:

To discover how important tree products are to us and to promote sustainable tree production. It is also to learn how to recycle and discover how easy it is to make recycled paper.

Materials

- Scrap paper and/or newspaper
- A blender (optional)
- Water
- Bucket
- Big square pan that's at least 8 cm deep
- Piece of window screen that fits the pan or a flour sieve
- Measuring cup
- Muslin Cloth
- Rolling pin or iron (optional)
- Vegetable scraps or dye for color, or dried flower petals (optional)

Activity Time: 1-2 hours

Lets Get Started:

- Tear the scrap paper into tiny pieces and soak them in a bucket of water overnight. Beat the mixture until it is a creamy pulp. You can add dye for color or add a small amount of leaves or petals for texture.
- Pour roughly 3 cm of water into the pan. Put the screen into the pan and pour the paper pulp onto the screen.

- Spread the pulp evenly in the water with your fingers. It should feel kind of mushy.
- Lift the screen and let the water drain.
- Put the screen in the sun to dry. Let the pulp dry for at least 24 hours. You can also put petals and leaves at this stage to make your paper prettier.
- When the paper is dry, it is ready for you to use it to make cards or bookmarks.

Composting

Activity 6.4: Vermicomposting With Mr. Wormy

What will they learn:

Vermicomposting is a composting method done with the help of red wriggler (worm). These worms prefer to live in the dark and have the nature of consuming and digesting food faster. Therefore, they are selected for composting organic waste at household level.

Materials

Bin: Any bucket or basket with potential of air circulation can be used as a worm bin. (plastic bucket with holes, hay basket etc)

Bedding material: Material like hay, saw dust, bean's cover, newspaper, paper can be used after being soaked in water over night or at least few hours before setting up the bedding in the worm bin

Waste: All organic waste produced from the kitchen can be used as food for the worm. But one has to avoid oily and acidic food. Meat and bones should be avoided in order to save the worms from mouse. Sugar and sweet should be avoided to save the worms from ants.

Worms: *Eisenia fetida* also known as redworm, it is a species of earthworm adapted to decaying organic material. These worms thrive in rotting vegetation, compost, and manure. In a worn bin, 500 to 1000 worms should be introduced. The amount of worms also depends on the size of the family.

Lid: As the worms do not like light, the lid used should be of a material that does not penetrate light inside the worm bin.

Activity Time: 1-2 hours

Lets Get Started:

Millions of tons of food waste are buried or burned each year at considerable financial and environmental cost. Instead of discarding your food scraps, you can recycle them with the help of worms. Vermicomposting (worm composting) turns many types of kitchen waste into a nutritious soil for plants. When worm compost is added to soil, it boosts the nutrients available to plants and enhances soil structure and drainage.

- "Red worms" are best for the nutrient-rich worm castings or vermicompost (worm poop) which is the end result of worm composting. They are different from the earthworms and night-crawlers found in your compost pile who live underground and depend on cooler temperatures and an extensive tunneling system to survive. These regular earthworms cannot live in a warm bin.
- You and your worms will help the environment by reducing the amount of garbage you produce. A medium-sized worm box can process more than 5 pounds of food waste each week. In return, you get dark crumbly, earthy-smelling, nutrient-rich humus good for growing anything.

Setting up the Worm bin:

- Select an area in your house that has the least sunlight or shade. The bin can be placed inside the kitchen as well.
- The bedding material has to be soaked in water so that it is soft enough for the worm to be placed.
- Place a jute sack at the bottom of the worm bin. Spread a layer of damp pieces of paper on top of the sack followed by damp sawdust. This will make a good bedding for the worms. About six to eight inches of moist bedding should be placed in the worm bin.

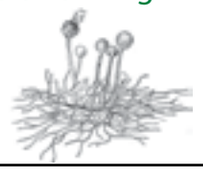
- Place the food scraps from your kitchen on top of the bedding equally and spread some mud and sawdust if possible. Worms eat about half of their weight in food each day. Smaller pieces of food scraps will be easier for the worms to break down than larger pieces, so all food scraps should be crushed, ground down, or broken before being added to the worm bin. Meat, bone, fish, or dairy products have proteins that cause odors as they decompose and will attract pests to the worm bin.

- Introduce the worms and cover the worm bin. Remember that the worms do not like the sun. Cover the worms with another layer of food. The worms will move away from the light and burrow into the bedding.

- Cover the bin with a damp sack or a thick layer of newspaper to keep the bin moist and dark. If the food scraps are uncovered, they could attract fruit flies and get moldy and smelly.

- Keep in check the moisture contain inside the worn bin, if you notice water or black liquid it can be collected as a fertilizer but we have to add dry natured waste like paper, saw dust to maintain the quality of the compost at the end.

How Is My Worm Bin Doing:

Problems	Causes	Solutions
Bin Smells Bad 	Overfeeding Food scraps exposed Bin too wet Not enough air	Stop feeding for 2 weeks Bury food completely Mix in dry bedding; leave lid off Fluff bedding; drill holes in bin
Bin Attract Flies 	Food scraps exposed Too much food; especially citrus	Bury food completely Don't overfeed worms
Worms Are Dying 	Bin too wet Bin too dry Extreme temperatures Not enough air Not enough food	Mix in dry bedding; leave lid off Thoroughly dampen bedding Move bin where temperature is 55°- 77°F Fluff bedding; drill holes in it Add more bedding and food scraps
Worms crawling away 	Bin conditions not right	Solutions from above Shine bright light on bin
Mold Forming 	Conditions too acidic	Cut back on citrus fruits
Bedding Drying Out	Too much ventilation	Dampen bedding; keep lid on
Water Collecting In Bottom 	Poor ventilation Feeding too many watery scraps	Leave lid off for a couple of days; add dry bedding Cut back on coffee grounds & food scraps with high water content

Harvesting:

- After two to three months, the compost will be matured enough to harvest. Usually the matured compost is black in color and looks like tea leaves. If the nature of the compost is wet, it exactly looks like soil but black in color.
- Turn the bin upside down and divide the contents of the bin into several smaller pyramids. In presence of light all the worms will move at the bottom of this pyramid.
- Cut the top of the pyramid of compost that will be worm free. Continue until you only have worms at the bottom.
- You can also use a sieve to separate the compost from other components of the bin.



- Now you have your compost ready to use in your garden.

7. How Green Is My Community?

A green community is where people take care of their environment. It has a healthy environment with greenery, clean water and air. A green community practices preservation of natural resources for future generations. Where possible, natural resources should be enhanced to beautify cities, increase public awareness about the environment, and promote healthy living. Healthy people make healthy communities; therefore, communities should encourage individuals to remain active by preserving public open spaces, like parks, playgrounds, ponds, lakes, rivers and forests. It is an essential component of a green community to provide physical and economic access to farmers markets, organic markets, supermarkets and other places that sell fresh produce. Such practices will contribute to a healthier and more sustainable community.

An effort could be made to preserve green corridors so wildlife can attain the resources vital to their existence without the interruption of roads or fences. A green community should also make efforts to see that proper waste maanagement is being done in the community and by factories and businesses that may be in their locality.

Activity 7.1: Mapping My Community

What will they learn:

Children will identify environmentally-friendly features in their own community and will understand how their community deals with waste. Once children become aware of what environmental services are available in their own community, they will be encouraged to participate in these programs and become better environmental citizens.

Materials:

- Paper
- Pencil
- Coloring tools

Activity Time: 1-2 hours

Lets Get Started:

- Ask children to think about whether or not their community includes any of the eco-resources from the list below and where they might be located:
  - Parks and green spaces
  - Footpaths
  - Composting facilities
  - Cultural/historical sites
  - Recyclable waste collectors
  - Landfill or transfer station
  - Wildlife habitat
  - Nature Education sites/ facilities
- Make children draw a map of their neighborhood indicating where any of these services/places can be found. These maps do not need to be geographically accurate.
- Tell them to be creative and estimate where these things are located in relation to their home or their school.
- When the children have completed their maps, lead them in a discussion about how often they visit their local park, trails, educational sites, or second-hand stores. If they do not visit these places often, maybe you can arrange a field trip to one or more of them.

GREEN MAP ICONS

Nature

FLORA
- Forest/Protected Area
- Special Tree
- Garden
- Park/Community Garden

FAUNA
- Bird watching
- Fishing
- Butterfly/insect habitat
- Wildlife Habitat

LAND & WATER
- Wetland
- Drinking Water
- Agriculture
- Green Coridor

OUTDOOR ACTIVITIES
- Nature Walk
- Camping
- Scenic site
- Nature Photography

Sustainable living

RENEWABLE RESOURCES
- Solar Energy Site
- Hydro Power Station
- Wind Energy Site
- Composting Center

GREEN ECONOMY
- Solar Energy
- Organic Produce Market
- Organic Farm
- Recycling Center

MOBILITY
- Bike Path
- Wheelchair accessible
- Bus Station
- Footpath

HAZARDS & CHALLENGES
- Air Pollution
- Water Pollution
- Landfill
- Deforestation

Culture

CULTURAL LANDMARKS
- Place of Worship
- Museum
- Memorial
- Archaeological site

GOVERNMENT & PUBLIC LANDMARKS
- Government Office
- Bank
- Library
- Hospital
- School
- Court
- Police station
- Army area

ECO LANDMARKS
- Nature Center
- Pollution Monitor
- Research Center
- Botanical Garden

ISBN: 2-8805-7
Printed: 2015