

SMALL STEP BIG CHANGE

Sanitation and You



A Sanitation Manual for
for School Students
issued on the launch of the
National School Sanitation Initiative

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**A SANITATION PRIMER
FOR SCHOOL STUDENTS
ISSUED ON THE LAUNCH OF THE
NATIONAL SCHOOL SANITATION INITIATIVE**



TOWARDS CITY WIDE SANITATION



सर्वकारेण प्रवर्तितं
Government of India

Ministry of Urban Development &
Ministry of Human Resource Development

gtz



www.schoolsanitation.com

MESSAGE



I am delighted that a Kids manual on Sanitation has been prepared based on the main National School Sanitation Manual. I am sure that the Kids Manual would generate keen interest among young children towards sanitation and safe hygienic practices.

I must congratulate the experts involved in the Manual Development Committee

The Schools and students are going to play a very vital role in attaining the goals under the National Urban Sanitation Policy (NUSP) and making its vision a reality. Schools are the most important and basic links and they have a definite reach out to the parents, families and consequently the community.

We need to train them young by “catching them young” and transform them into “Agents of Change” in this area.

I am sure that the “Health & Wellness Clubs” propagated by the CBSE would definitely find a new impetus through the National School Sanitation Initiative.

I wish all success to the Initiative and the School Health and Wellness Clubs.

Vineet Joshi

INTRODUCTIONS



Mina, a 14 year old student of class 8 at Santushti High School at Jamaipada. She is the captain of the Health and Wellness Club.



Afzal, a year younger than Mina, he studies in the same school and is concerned with the filth and lack of green in and around Jamaipada.



Roshni, 9 years old, very curious and scientifically inclined.



Shri Dimag Batti, the person with all the answers, he helps our young protagonists become more environmentally conscious.



Kenchu ji, the neighbourhood earthworm. He and his family live in and around the school gardens.

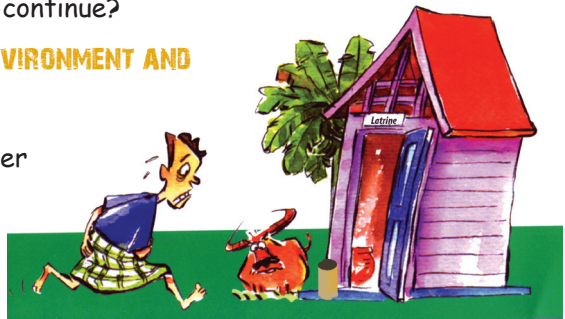
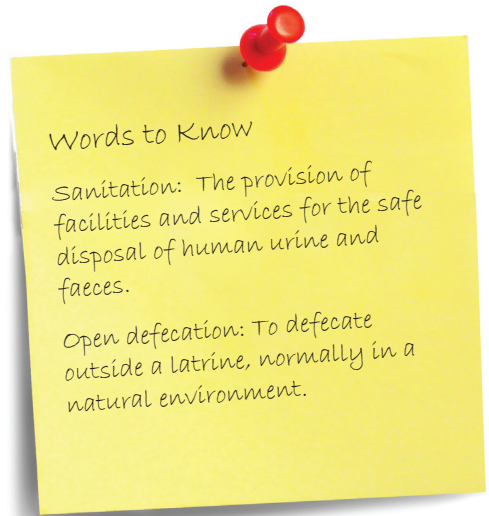
SANITATION AN INTRODUCTION

Not having proper sanitation facilities means that people come in direct contact with environmental contaminants, including human faeces. This leads to diarrhoeal diseases, chronic diseases, fevers and infections. Some of these health outcomes have been studied for extended periods, while other diseases are emerging in areas for the first time or are rapidly increasing.

Sanitation is one of India's biggest problems. Approximately 30.66 million urban households have no toilets in their homes. In slums, there are no toilets. So a huge population has to use open areas to answer nature's call. India today has nearly ten million bucket toilets that are manually cleaned by scavengers. We cannot let this continue. Diarrhea caused by poor sanitation and hygiene is one of the major causes of mortality amongst under 5 year olds. Many schools in India do not have toilets and this is one of the main reasons why girls dropout from school once they cross the primary level. Can we let this continue?

SANITATION IS KEEPING THE ENVIRONMENT AND OURSELVES CLEAN

With a little precaution, proper toilets, habits of washing hands before and after using the toilet, before and after touching something dirty,



before handling food and before and after eating, all diseases caused by unsanitary conditions can be avoided. The sad part is that we so often neglect to do this.



PERSONAL HYGIENE

Hygiene is more than just being clean. It is defined as the many practices that help people be healthy and stay healthy. Practicing good personal hygiene is necessary for two reasons. First, it helps prevent you from catching and spreading illness and disease. Second, it helps you feel good about yourself and your body.

In any society cleanliness is an important issue; poor hygiene is not nice and it is unhealthy.

If you follow the rules for personal hygiene and turn them into a habit you will remain healthy and not contract "sanitation" related diseases.

Did you Know

The term "hygiene" is derived from 'Hygeia' the Greek goddess of health, cleanliness and sanitation.

Here are things you need to do to stay healthy:

- Have a bath everyday. Dry yourself with a clean towel.
- Wear clean clothes.
- Wash your hair at least once in two or three days using soap or a shampoo.
- Cut your nails and clean them daily.
- Comb your hair everyday.
- Brush your teeth in the morning when you wake up and a night before you go to sleep.
- Rinse your mouth with clean water after you eat anything.
- Wash your hands with soap before eating, after eating, before touching foodstuff and after touching anything dirty.

Always wash your hands after going to the bathroom.



Activity for juniors and seniors.

Global Hand washing Day this year is on October 15, 2010

Create your own 'Hand washing Day'. Spread awareness amongst the students and staff of your own school, in the other schools in your city and in your neighbourhoods.

Seniors and juniors can form groups along with some teachers to discuss what can be done and which aspects of sanitation you wish to highlight, what cleanliness habits you wish to inculcate. You will also need to plan the mediums you wish to use—they could be a play, poems, posters, inviting guest speakers, drawings depicting various personal hygiene habits, etc.

Make everyday a hand washing day!

Each group should vote for a leader to represent the group.

Leaders from each group come together to formulate a plan of action!

The next step is to take the plan to the principal and the school authorities.

BEGIN THE SERIOUS WORK AND

ALL THE BEST

SMALL STEPS

Always-

Use a proper bathroom or toilet.

Wash your hands well with soap after using the loo.

Wash your hands before touching food and before and after eating.

Throw rubbish in the dust bin.

BIG CHANGE

Good habits of personal hygiene ensure a healthy you

Use of a loo to relieve yourself ensures a healthy, pollution free environment

Activity for juniors and seniors Make a small booklet listing good personal hygiene rules to follow. Draw pictures and colour them if you like or cut and paste some pictures.

This is for your eyes only! Keep it near your bed. Read it before you go to sleep and in the morning when you wake up.

Tell yourself

YOU HAVE TO LOOK AFTER YOUR PERSONAL HYGIENE

Personal hygiene is a powerful tool to achieve health, wealth and happiness but you have to practice it all day, every day.

ENVIRONMENTAL HYGIENE AN INTRODUCTION

The environment is something we are all very familiar with. It is everything that makes up our surroundings and affects our ability to live on the Earth—the air we breathe, the water that covers most of the Earth's surface, the plants and animals around us, and much more.

In recent years, scientists have been carefully examining the ways in which people affect the environment. They have found that we are causing air pollution, deforestation, acid rain, and other problems that are dangerous both to the Earth and to ourselves. These days, when you hear people talk about "the environment", they are often referring to the overall condition of our planet, or how healthy it is.

Words to Know

Environment: our surroundings, the sum of all living and non-living things that surround us.

Pollution: the introduction of harmful substances into the air, land and water.

Waste: useless things that you throw away because they are no longer wanted or of any further use.



What is environmental hygiene?

Environmental hygiene includes activities which are aimed at improving or maintaining a positive standard of basic environmental conditions that in turn affect our well-being and health. They include:

- (1) A clean and safe water supply.
- (2) Clean and safe air.
- (3) Clean, green and beautiful open spaces.
- (4) Efficient and safe animal, human, and industrial waste disposal.
- (5) Protection from chemical contaminants.

WHY DO WE NEED TO WORK ON KEEPING OUR ENVIRONMENT CLEAN? SURELY THIS HAPPENS NATURALLY

Unfortunately with progress, development and changed life styles, pollution and waste have also increased. The result is that we have to take a serious look and see what we can do to ensure a healthy environment for our health and happiness.

Let us look at each aspect of the environment:

Water is essential for all life. To take the example of humans:



1. We need water to drink. Approximately 60 percent¹ of our body is water. The water in our body regulates our temperature, moves nutrients through our cells, keeps our mucous membranes moist and flushes waste from our bodies. Our lungs are 90 percent water, our brains are 70 percent water and our blood is more than 80 percent water. Simply put, we can't function without it.
2. The food we eat needs water to grow.
3. We need water for our bodily functions, for bathing, washing, cooking and plenty of other things too.
4. We need clean and safe water to remain healthy.

Computers, cars, paper, pots, cosmetics and almost every manufactured item is made using water. Approximately two-thirds of our Earth itself, the "blue planet", is covered by water.

There is no way to escape the fact that we are utterly, and ultimately, dependent on water.



Activity for juniors and seniors

Find out: Where does your water come from? Where do your wastes go?

What pollutes water? What does a water treatment plant test for? Can we recycle water? If so, how is this done?

Discuss in a group: How can all of you work towards clean and safe water for yourself, your family and friends.

Activity for seniors

Form groups and find out details for water harvesting. Together make a presentation to the school authorities and your teachers.

You may make a power point presentation or you may decide to put up an exhibition with write-ups and posters.

Start water harvesting in your school and homes.





THINK TANK



FLOODS! What would happen if the world got hotter? Some scientists estimate² that if the temperature rises just 3 to 10 degrees Fahrenheit by the middle of the next century, ice caps would melt enough to flood much of the New York City. What do you think will happen to India? Will it affect you?

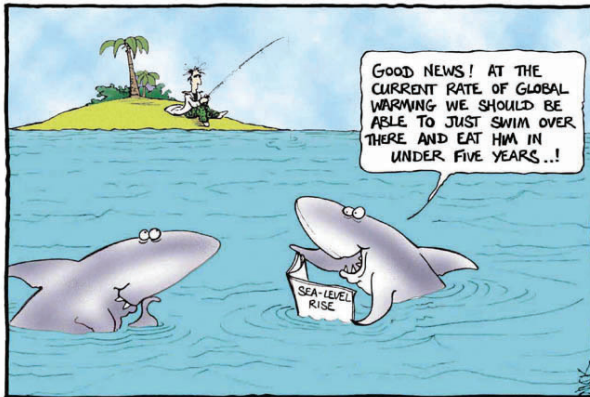
What is global warming and what effect will it have on the earth, water, and air?

Are the climatic changes we see today due to global warming? Have there been similar incidents over the recorded history of mankind?

What is the IPCC? What is their position on climate change? What are the other views on it?

Put on your thinking cap and ask yourself, 'How does climate change affect you, your family and friends?'

Discuss what you individually and as a group can do. And then make sure you do it!

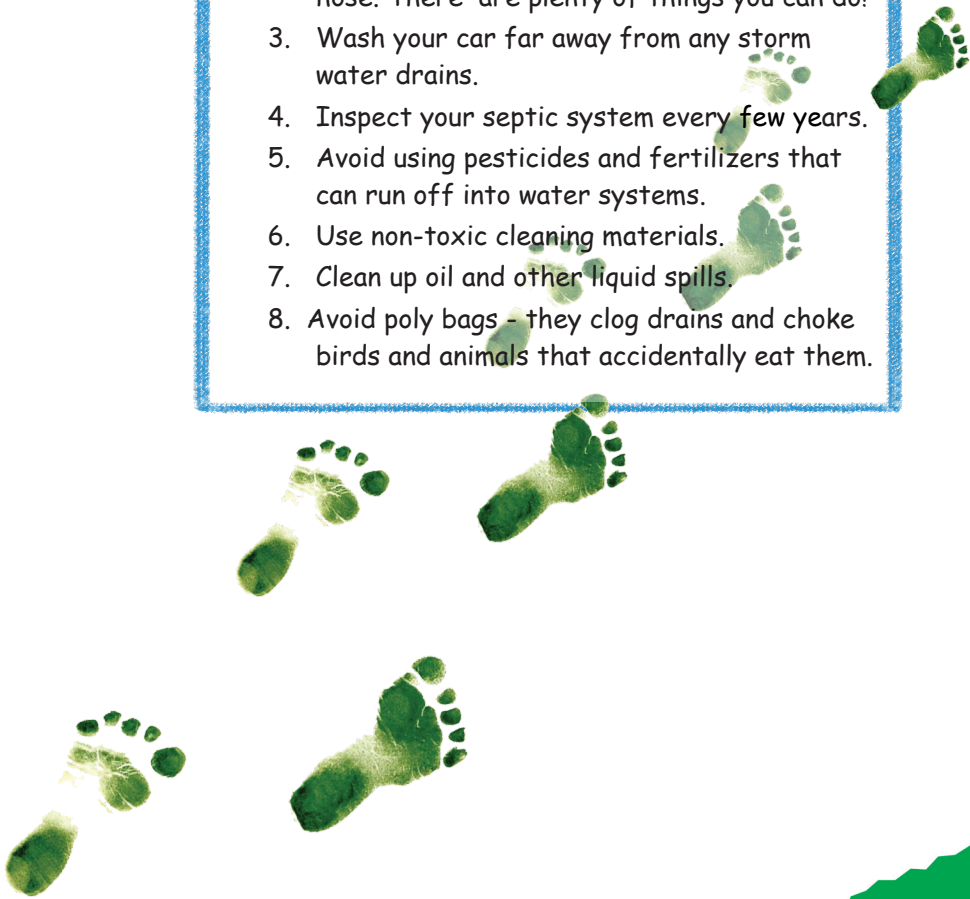


<http://opinionsandexpressions.wordpress.com>

SMALL STEPS

BIG CHANGE

1. Don't throw garbage and other harmful chemicals into sewer drains. Try and reduce the amount of chemicals that are used in your home. Discuss this with you parents.
2. Reduce the amount of water used at home - turn off taps, avoid shower baths and switch to using a bucket of water when you bathe. Don't wash your driveway and car with a hose. There are plenty of things you can do!
3. Wash your car far away from any storm water drains.
4. Inspect your septic system every few years.
5. Avoid using pesticides and fertilizers that can run off into water systems.
6. Use non-toxic cleaning materials.
7. Clean up oil and other liquid spills.
8. Avoid poly bags - they clog drains and choke birds and animals that accidentally eat them.



AIR



Air is the odourless substance, which we cannot see but we need to breathe in order to live. Air consists of many different gases. The one we need to breathe is called oxygen.

We breathe in oxygen, which helps us convert food into energy in our cells, and to get rid of carbon dioxide - the waste gas which is formed as this happens. Our lungs pump these gases in and out of our bodies.

Air pollution occurs when the air contains gases, dust, fumes or odours in amounts that become harmful for our health and comfort, affect animals and make them ill and which cause damage to plants and materials.



Activity for juniors and seniors

1. What's in the air we breathe? Conduct this test. Coat several sheets of paper with a thick layer of oil. Place each sheet in a different place - near a busy street corner, near a factory, in your home and in your school. At the end of two days, collect them. Look at each sheet. Are they dirty? What does this prove about air pollution?



SMALL STEPS

BIG CHANGE

1. Use your influence at home - ensure your car has a genuine pollution control test done periodically and is well maintained. Think about carpooling - is it a possibility for you? For others at home? What about using mass public transport?
2. Walk or ride your bicycle to nearby places.
3. Use the internet to shop or find out information instead of driving.
4. Conserve energy since traditional energy production causes air pollution.
5. Avoid burning wood, leaves, garbage, etc.
6. Recycle.
7. Plant trees.
8. Don't use harsh chemical cleaners that can emit fumes.
9. Inspect your gas appliances and heaters regularly.
10. Don't buy products that come in aerosol cans

We need air!

The average adult at rest inhales and exhales something like 7 or 8 liters³ (about one-fourth of a cubic foot) of air per minute. That totals something like 11,000 liters of air (388 cubic feet) in a day.

The air that is inhaled is about 20-percent oxygen, and the air that is exhaled is about 15-percent oxygen, so about 5-percent of the volume of air is consumed in each breath and converted to carbon dioxide. Therefore, a human being uses about 550 liters of pure oxygen (19 cubic feet) per day.

A person who is exercising obviously uses a lot more oxygen than that. You could determine how much air is moving through your lungs by exhaling into a plastic bag of known volume at each breath and seeing how long it takes to fill the bag.



yeah me too!!



LAND

Land is the solid part of our planet Earth. It is the part on which we live, where our cities are, where we build our houses and grow the food we eat. It is the part that has the mountains, through which the rivers flow down to the sea.

It is our home! It is also home to a large number of animals, plants, flowers, bees and butterflies!

This land of ours has been polluted by our activities and the way in which we humans have misused land resources.

It has happened because there is

too much waste and because waste has not been disposed-off properly. Haphazard disposal of urban and industrial wastes, exploitation of minerals, deforestation and improper use of soil by inadequate agricultural practices are a few factors.

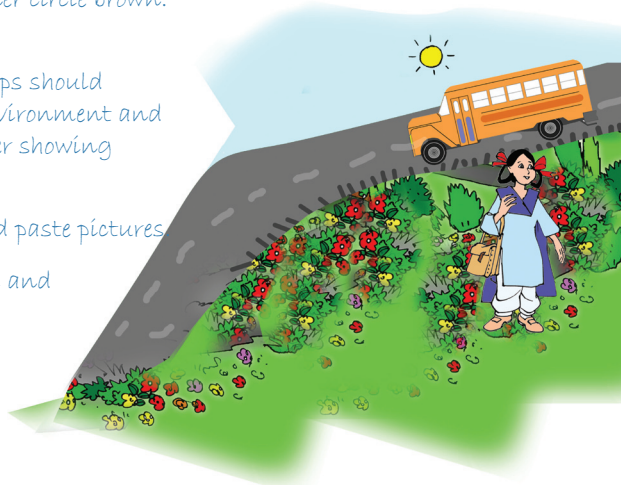
Activity for juniors

1. Draw two circles one inside the other to show air, land and water. Divide the inner circle into 4 equal parts. Now colour the outer circle blue, this is the air around us. Colour three parts of the inner circle blue. This is the amount of water on the earth. Colour the remaining part of the inner circle brown. This is the land on which we live.

2. Divide into four groups. Two groups should make a poster showing a healthy environment and the other groups should make a poster showing unhealthy environment.

You may draw and colour or cut and paste pictures.

Put up the posters in your classroom and discuss them with your teacher.



Activity for seniors:

Write an essay on pollution and how it affects you.



Humans with their activities and greed have destroyed natural habitats and polluted the environment, causing diseases in both humans and other species of animals and plants. What can we do to reverse the damage?

You know a disease is an impairment of health or a condition of abnormal functioning in the body. It makes you feel ill, sick, unwell and is caused by germs, viruses or bacteria.

Find out how these germs, viruses bacteria find entry into your body.

What are air borne and water borne diseases. Make a list of common air and water borne diseases.

Divide into groups and discuss- the symptoms, preventions and what you can individually or as a group do to educate others, your juniors, friends, family members and the people in your neighbourhood.



SMALL STEPS

BIG CHANGE

1. Recycle.
2. Reuse any items that you can.
3. Buy biodegradable products.
4. Store all liquid chemicals and waste in spill-proof containers.
5. Eat organic foods that are grown without using pesticides.
6. Don't use pesticides.
7. Buy products that have little packaging.
8. Don't dump motor oil on the ground.

WASTE SEGREGATION AN INTRODUCTION

Waste, as we all know, is useless things that you throw away because they are no longer wanted or of any further use. Waste can be dry leaves, vegetable or fruit peels, paper that cannot be used, old clothes, old bottles, tins, toys or books, plastic bags and many other things. 'Segregation' means to separate. When we speak of waste segregation, we mean the separation or categorization of things that are no longer useful for us with the purpose of disposing of it in the most appropriate manner or giving it a new life through reuse or recycling.

Waste is basically segregated or separated according to the following types:



BIODEGRADABLE WASTE is a type of waste, which will rot and change into manure. It will eventually break down and become part of the earth and soil. Biodegradable waste can be food waste, fruit or vegetable peelings, dry leaves, paper, cloth, etc.

Words to Know

Degrade: means to break down into a simpler form.

Biodegrade: means breaking down of organic substances - substances made from, or parts, of plants or animals, with the help of other living organisms such as bacteria and microbes.

Landfills: Large rubbish dumps.



NON BIODEGRADABLE WASTE is a type of waste which will NOT break down or, at least, will not break down for many years. It will not rot and change into manure to enrich the soil. Examples are plastics, metal and glass, plastic grocery bags, styrofoam from which disposable drinking glasses and plates are made, and other similar materials like thermacol.

Such waste piles up and causes pollution. There is no way of destroying it other than burning it. Burning waste like styrofoam, plastic, etc. pollutes the atmosphere. Waste is often dumped in low lands called landfills. Waste also pollutes the land. For example, mercury, a highly toxic substance, found in certain medical and other instruments, like the mercury thermometer, is one of the many chemicals pollute the earth.



BUT THATS NOT ALL

WASTE CAN BE ALSO BE CLASSIFIED AS

RECYCLABLE WASTE - Recyclable waste can be of different types, such as paper, wood, cotton, reusable hardware, glass, metal scrap, etc. Waste that can be used to make other new products or can be sterilized and reused is called recyclable waste.



NON RECYCLABLE WASTE -Non-recyclable waste includes polythenes and plastics, which cannot be treated for reuse. A good example is the plastic carry bag, which is in such constant demand. Plastic bags pile up as garbage, dirtying the surroundings and when mixed up with biodegradable waste in landfills prevent the biodegradable waste from decomposing as they block the oxygen supply necessary for decomposition.



E WASTE E-waste is formed of electronic equipments such as computers, servers, monitors, TVs, mobile phones, calculators, printers, scanners, copiers and fax machines besides refrigerators, air conditioners, washing machines, microwave ovens, DVDs, CDs, floppies, tapes, printing cartridges, batteries, electronic components such as chips, processors, mother boards, printed circuit boards, industrial electronics such as sensors, alarms, sirens, security devices and more. Every year, there are a large number of these devices that become obsolete or stop working and are thrown out.

Proper disposal of e-waste is necessary as the toxic materials used in the manufacture of some components contaminate the environment.

Did You Know

240 Kgs⁴ of fossil fuel, 22 Kg of Chemicals and 1500 Kg of water are needed to produce one computer. When dead computers are placed in landfills, burned or improperly recycled, toxic substances are released into the ground, air and water-Bad use of resources and bad disposal... Can it get any worst

With extensive use of computers and electronic equipments and with people dumping old electronic goods for new ones, the amount of E-waste generated has been steadily increasing.



Good grief!!!

An EMPA-GTZ report titled 'Whither e-waste in India', says that Bangalore alone generates about 8000 tonnes of computer waste annually...most of which finds its way to the scrap dealers. The **GOOD NEWS** is E-Parisara, an eco-friendly, scientific recycling unit near Bangalore recycles E-Waste and gives it a new life! It aims to reduce pollution caused by improper disposal of waste in landfills by recovering valuable materials like metals, plastics & glass from disposed-off items in an eco-friendly manner. E-Parisara recycles about 1 tonne of e-waste per day, though its daily capacity is of 3 tonnes! Their innovations (which are many) include low-cost circuits that extend the useful life of fluorescent tubes to more than 2000 plus hours and can also function at voltage supplies of less than 180 volts.

Now isn't that going to brighten your day!

CHEMICAL WASTE is a waste that is made from harmful chemicals (mostly produced by large factories).

HAZARDOUS WASTE Waste that contaminates the environment or adversely affects plants and animal (including human) life. Hazardous waste comes from many sources and requires specialized disposal

YOU CAN DO IT

SMALL STEPS

Collect waste of different types in different containers.

Reuse and recycle as much as possible.

Donate what you cannot reuse or recycle.

Dispose harmful waste carefully, only to the people equipped to handle it.

BIG CHANGE

By doing this we reduce the amount of waste that actually gets thrown away.

The total amount of waste used for landfills gets reduced.

Harmful waste does not pollute air, land or water.

The environment stays clean and healthy.



WASTE MANAGEMENT IN THE SCHOOL AN ACTIVITY FOR THE WHOLE SCHOOL

Create a 'Waste Management Club' - membership compulsory for all students, all the teaching and non-teaching staff plus every member of the school authorities.



Step 1. Conduct an awareness activity on waste management in the school.



Step 2. This is for the senior leaders or the school team

Request an appointment with the Principal to tell her/him of your findings.

Request permission to form a 'Waste Management Club' and to hold a meeting of the leaders chosen from each class to discuss appropriate and do-able waste management and techniques.

Request the Principal to conduct a meeting for the staff and tell them about waste management.

Request the Principal to have different coloured bins put in each classroom, office and in some identified areas of the school premises. You will need to decide which colours and which colour for which kind of waste-After this the whole school will follow this identification.



Step 3. Let the class groups choose a leader and let the leaders meet and make a list of the changes required. The equipment, which will be required to segregate the waste into;

1. Waste that can be recycled.
2. Restored or repaired and reused.
3. Bio degradable waste.
4. Waste that is non-degradable.



Step 4. The work begins

Label coloured bins correctly.

Collect waste in the correct bin.

Make posters and put them up on the notice boards, corridors and classrooms identifying what waste items go into each bin.

Activity for seniors

Research on the net, read up in the library, talk to professionals in the field to identify biodegradable products and how long they take to biodegrade.

Put your findings on charts to be displayed through the school.

Seniors can monitor that the bins are being used correctly and let the teacher concerned know if something is not correct.

After the students have got the whole process working the process of disposal belongs to the administration.

**THE ENVIRONMENT WILL BLESS YOU FOR REDUCING ITS BURDEN...
BUT THE NAME OF THE GAME IS SUSTAINED EFFORT AND WORK**

COMPOSTING AN INTRODUCTION

Compost is a rich crumbly manure made from plant waste such as vegetable peels, dead leaves, etc. It is used as a fertilizer for garden soil and has the nutrients plants need to grow strong and healthy.

Composting is an inexpensive and effective method of recycling organic waste materials and turning them into manure. It is the biological process of breaking up of organic waste such as food waste, manure, leaves, grass trimmings, paper, etc., into an extremely useful humus-like substance by various micro-organisms such as bacteria, fungi, actinomycetes, etc. in the presence of oxygen.

Composting is not a new idea. It is nature's way of recycling. In the natural world, composting happens as leaves pile up on the forest floor and begin to decay. Eventually, the

rotting leaves are returned to the soil, where living roots can finish the recycling process by reclaiming the nutrients from the decomposed leaves.



Words to Know

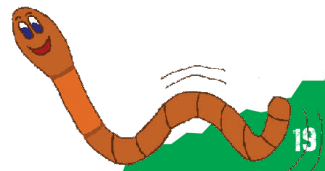
Nutrients: these are the many different things that make up food that living things require to live, grow and be healthy.

Organic waste: biodegradable waste from plants or animals which is broken down by other smaller living things.

Decompose: to rot, biodegrade.

Fertilizer: anything such as manure that is used to make soil good for plants to grow in. Fertilizer can be organic or chemical.

Actinomycetes: these are similar to fungus in the way they grow and spread. The active nature in this microscopic bacteria and the sheer numbers present (about 10 million per 1 gram of soil), make them highly effective at breaking down materials like tree bark, newspaper, and other hard organic material.



Adopting composting is important today because:

- Composting helps turn waste materials into a valuable resource.
- Composting reduces the pressure on landfills. By reducing landfills composting can help in directly reducing the impact landfills have on the environment.

Water, nitrogen, carbon, and oxygen all together are a perfect mixture to combine with organic matter to materialize the process of decomposition. This procedure results in production of compost which will eventually help the soil become healthy for planting.

WHY COMPOST

Recycling the organic waste of a household and the leaves from the garden into compost allows us to return badly needed organic matter to the soil. In this way, we participate in nature's cycle, and cut down on garbage at the same time.



WHO CAN COMPOST

Composting can be taken up in the home and in the school.



WHAT IS VERMICOMPOSTING

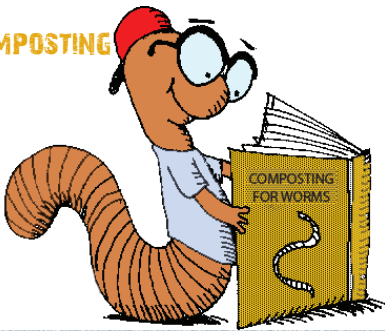
Vermicomposting is composting with worms. It creates good, nutrient rich soil that helps plants grow. Vermicompost is clean and does not stink. It is an environmentally healthy way to get rid of garbage. The worms get a good meal and their poop, or castings, produces good soil that helps us grow better flowers and vegetables.

WHERE CAN WE COMPOST

The great advantage of vermicomposting is that it can be done indoors and outdoors. Vermicomposting can be done in a container in your house. All you need are some worms. You get rich soil for your plants and the vegetable peelings do not need to go into the garbage. It is a wonderful idea!

GET ORGANIZED

START COMPOSTING



Jean Pain (1930 - 1981) was a French innovator who developed a method of composting that produced 100% of his energy needs. He heated water to 60 degrees celsius at a rate of 4 litres a minute which he used for washing and heating. He also distilled enough methane gas to run a generator electricity. This method of creating usable energy from composting materials has come to be known as Jean Pain Composting, or the Jean Pain Method. If you would like to know more about it, look it up on the Internet.

I WILL HELP

SMALL STEPS

1. Collect vegetable and fruit peelings
2. Collect dry leaves
3. Buy or get worms for vermiculture.
4. Make a compost pile in a container.
5. Use the manure to grow plants.

Activity for you

Start a compost pit: You can help the bio-degradation process accelerate! Segregate non-biodegradable waste from the biodegradable waste and start a compost pit in school!

The Project Plan: This project can be done by seniors along with the concerned teacher. It will need permission and support from the Principal and support from the administrative and maintenance staff.



Step 1. Ground work

Form groups that will research composting. Use the Internet, read about it in the library, talk to gardeners and seek professional help. Schedule a time plan for your next meeting. Discuss your findings.

Develop a plan of operation that outlines the procedures for conducting the composting project along with the equipment that will be needed, the cost involved and where the equipment can be bought.

In your plan you will need to outline where the manure produced will be used and show how it will benefit the school garden.



Step 2.

Now present the plan to the school principal. And seek his/her permission and support.

Having received permission from the Principal, this plan will need to be taken to the Accountant and Administrator for the buying of the equipment.



Ask the maintenance staff for help.



Step 3. Find a suitable outdoor site for the compost pile. The pile should be exposed to rainfall, but will work best in a shaded location. It needs to be near a water source.



Step 4. Now to begin the actual, physical work on the project. Remember to maintain personal hygiene. List out how you will do this carefully on a chart and put it up where it is easily visible.

The whole school can now pitch in and bring vegetable peelings from their homes for the compost pile.

BIG CHANGE

By doing this you :

Recycle organic household waste and the leaves from the garden.

Reduce waste.

Return badly needed organic matter to the soil.

Make the surroundings green.

HAPPY COMPOSTING

The resulting product of your composting endeavour will be crumbly, dark, soil-like humus that makes an incredibly rich, organic fertilizer and plant food for your garden.

You also get the added benefit of keeping a lot of unnecessary stuff from being dumped into our landfills.

BESIDES YOU ARE DOING SOMETHING TO HELP OUR EARTH.....

THANK YOU!

REDUCE REUSE RECYCLE AN INTRODUCTION

The 3 Rs that could save the planet! Reduce, Reuse and Recycle. We all know what they mean:



REDUCE - USE LESS

Use or consume less water, electricity, petrol and energy to whatever extent possible. Avoid unnecessary wastage of these resources. Buy less and use less in the first place.

REUSE - USE AGAIN OR FIND A NEW USE FOR

A reusable thing might need cleaning, sterilizing, or repair, but then it's ready to be put into use again.

RECYCLE - BREAK IT DOWN AND THEN MAKE SOMETHING NEW WITH ITS COMPONENTS

Recycling takes waste and grinds, melts or decomposes waste back into raw materials that we use for new products. Recycling the right things can save energy, animal habitats and minerals. This helps conserve (save) raw materials and energy that manufacturers would need to make new products. Recycling reduces the amount of material going waste.

Recycling also helps to lessen the pollution that may result from waste disposal.

The latest cell phone on the market - think before you buy it! Do you really need it? Is it going to substantially improve your life to have it? (We are talking about **'reducing'** consumption here)



IN OTHER WORDS



The carry bags you collect each time you go shopping. What do you do with them? Throw them out? Or **'reuse'** them the next time you go to the market so that you **'reduce'** the need for another carry bag?

What happens (or should happen) to all your old school books? Okay, so you keep passing them down to your juniors until finally they're old and tattered but what happens after that? Well, there are many possibilities, but one of them is that the paper is re-pulped and new **'recycled'** paper is made from them. That means you get new, clean paper without cutting down any more trees!



The 3 R's reduce the amount of waste produced and the resulting disposal problems. They are also less polluting, cheaper and more energy-efficient than taking new material from the environment.

Did you know?

It is estimated that India will probably see a rise in waste generation from less than 40,000 metric tonnes per year to over 125,000⁵ metric tonnes by the year 2030...and probably about 60% of that rubbish can be recycled!



1. Buying less is the best way to reduce.
2. Think before you buy ask yourself - Do I really need it? How often will I use it? Do I really need such a large number/amount?
3. Do not buy things that you will throw away after one use. Avoid things like disposable plates, spoons and glasses. Reduce the number of batteries you buy. Change to rechargeable ones.



4. Don't buy just because there is a sale and you think things are inexpensive.
5. Don't buy something you do not need only because someone else has it.
6. Don't buy only for show.
7. Give old things a new life and reduce the pressure on important resources. Conserve raw materials and fuel that we will need in the future.
8. Use a refillable bottle for water instead of buying mineral water every time you're out of home. Reduce the amount of plastic being thrown away.



9. Use reusable cloth bags instead of plastic bags.

10. Buy products that come without boxes or excess packaging

11. Reduce paper consumption - switch to ebooks, emails and ecards. Reuse paper printed on one side to write notes, or to make shopping or to-do lists.



12. Use a cotton handkerchief instead of paper tissues. You can wash and reuse it many times.



13. Buy recycled paper or paper made from cotton rags or agricultural waste. Paper that is not made from trees saves the forests.

14. Reduce electricity consumption - Switch off lights and fans when you leave a room. Don't leave electrical equipment on standby, switch them off.



15. Find out about the Bureau of Energy Efficiency ratings for appliances. Encourage your family to buy electrical goods with a 4-5 star rating.

16. Reduce water consumption - turn off taps, repair dripping taps, don't let water flow needlessly, We've said it before ...but it's important!



17. Use a glass of water when you brush your teeth.

18. Pour only as much water, as you want to drink into a glass. Use the same glass through the day. Keep it covered so that it does not collect dust.

19. Water plants with left over water from your glass or water bottle.

20. Serve water in small glasses. Refill them if necessary.

21. Reduce E-Waste - Remember what we said? Buy rechargeable batteries, think before you throw away your old computer, music system, I Pod, printer. You may be able to get them repaired or they may still have a lot of life in them. Donate them so that they can be reused by someone who needs them in case you really have to get rid of them.

22. Recycle as much as you can - Newspaper, glass, corrugated cardboard, plastic bottles, water, etc.. A lot of recycling requires you to segregate and collect your waste so that large industries or organizations can treat and recycle products.



23. Start a compost pit - kitchen and garden waste are biodegradable and can be easily recycled as compost. This compost returns the nutrients back to the soil.

Activity for juniors and seniors: Activity also for the school staff.

Take time to list all the ways in which you can reduce the amount and number of things you use. Remind yourself of this every time you go out shopping.

Activity for juniors and seniors

Make a magazines and books exchange corner in your classroom.

Collect the magazines and books after you and your family have read them.

Take them to school and put them in the exchange corner.

Now you and your classmates can choose a magazine or book that you or your parents would like to read. Take it home, read it, then bring it back and put it in the corner for someone else to read.

You may want to ask your school librarian if a magazines and books corner can be added to the library.

Take time to list all the things you can reuse then really get down to it. Nike's Reuse-a-Shoe programme turns old shoes into playground and athletic flooring. Read more at: www.nikereuseashoe.com.

Check it out!

www.youtube.com has videos on how to reduce reuse and recycle paper. You might like to watch them for ideas.

www.planetpals.com has clipart symbols for the R's you might like to see.

www.cleanindis.org has an e-group you might like to join and a newsletter for you to read.

You might like to do a google search for reduce, reuse, recycle...

Classroom paper- An awareness and recycling activity for juniors and seniors.

The activity involves the whole class and is led by the class teacher



Step 1: Separate paper items from other classroom disposables for one week, segregating them into a suitable collection container. Label the collection container "Recyclable Paper."



Step 2: Discuss ways in which the amount of paper thrown away can be reduced and how the collected paper might be reused in the classroom. Are there other uses for the paper in the school?

The next steps are for the seniors.



Step 3: Weigh the paper after one week's collection.

Project the weight of paper that might be collected in a month's time, a semester and the school year.

Multiply the projected weights by the number of other classrooms in the school. Record the projections.



Step 4: Discuss how this paper can be reduced, recycled and reused.

Hint: Some methods to reuse and recycle can be a hand made paper project in school or papier-mache as part of the crafts project.

How much paper do you estimate can be saved in your class, school and city? If everyone does this how will it improve the environment?

Recycling survey: An activity for juniors and seniors.

This activity is to be conducted by the concerned teacher.

Many things in our household waste can be recycled provided that the householder has the initiative to recycle and convenient recycling infrastructure. A large amount of waste generated can be recycled but very little is at present recycled.



Step 1: Engage the class in a discussion on the subject of recycling.

Explain that recycling helps to conserve energy and natural resources, contributes to the economy, and reduces the amount of municipal waste requiring disposal. Recycling also promotes an awareness of the finiteness of our natural resources and offers an environmentally acceptable method of municipal waste management.



Step 2: Find out whether any students assist in a family recycling effort, or recycle on their own. Ask for descriptions of what and how they recycle? Is money earned from the effort? How many students have visited a recycling center?



Step 3: Suggest to the class that it would be interesting to discover how others feel about recycling. A survey could be conducted in the school, in the neighbourhood and in their own homes. This will show how many others in the school and community recycle.



Step 4: Have the class brainstorm a list of questions that they might ask others about recycling. Make a list of the questions that can be asked. Each student must carry his or her list of questions when they conduct the survey. Ask them to note down the answers.



Step 5: Discuss the results with the class. Are certain materials recycled more frequently than others? Why? What is the recycling participation rate? Do any recyclers recycle more than one item? Do non-recyclers suggest common reasons for not recycling? Are the reasons valid? Why do people recycle?



Step 6: The final step and a very important one.

Discuss how you can get more people to recycle more things. Talk to city authorities, visit the local kabariwallas and find out if and what they recycle. Discuss the possibility of a center for reusable and recyclable items. Maybe you can all get together and set up one.

Activity for seniors: Power point presentation on rainwater harvesting.

Collect information on rainwater harvesting. You can read about it in the library and search for it on the internet. List all the reasons why we need to go in for rainwater harvesting. Discuss the information, organize it and make a power point presentation for the Principal and staff. Discuss ways in which to collect rain water and of places where you can use it.

Make an actual working model, charts and write ups.

Organize an exhibition for the whole school and all the parents. Ask the juniors to join in the exhibition put up their drawings.

Recommend that the school begins rainwater harvesting.

Request parents to start rainwater harvesting for their houses.



DON'T 'WASTE' THE EARTH

ITS THE ONLY ONE WE HAVE



CLEAN SURROUNDINGS

Every thing around you forms your surrounding.

If you are in a room then the furniture, walls, floor, ceiling, books, notebooks and anything else which is there is a part of your surrounding.

If you are outside the building, the road, land, plants, animals and birds, and all the other things around form a part of your surroundings.

Your surroundings affect you.



WHY SHOULD WE KEEP OUR SURROUNDINGS CLEAN

Clean surroundings keep us healthy; they make us feel at peace and lead to happiness.

Things kept neatly in their places make it easy for us to find them when we need them.



Activity for juniors and seniors: Let your imagination run free!

Sit quietly with your eyes closed. Imagine a new place where you have never been before.

Think of extremely dirty surroundings with garbage all around, pools of dirty water, paper packets and empty plastic bags littering the area and flying around. Make it as horrifying as you can.

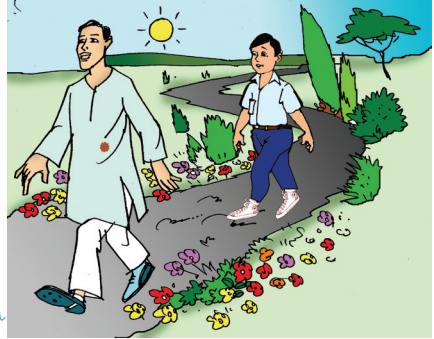
Think: How do you feel being in this place?

Now imagine a beautiful place, a place which is peaceful and clean with birds and plants. Colour it as beautifully as you can.

Think: How do you feel being in this place?

Now open your eyes.

Which place would you rather be in? How can you create the surroundings you like?



Activity for both juniors and seniors led by the teacher:

1. Divide into groups and discuss all the things that go towards making the classroom dirty.

Use this list to formulate a set of rules to keep the classroom clean.

2. Identify actions which lead to making the school premises dirty and then list all the things students can do to clean it and to keep it clean.

Every time the children forget - and there will be many, remind them of how they felt in the dirty place they had imagined.

Activity for juniors:



Create an anti litter squad whose job will be to see that their school and neighbourhood stay clean.

SMALL STEPS

Use the dust bin to throw paper, other trash or rubbish.

Put things neatly back in their place.

BETTER STEPS

Follow rules to Reduce, Reuse and Recycle.

BIG CHANGE

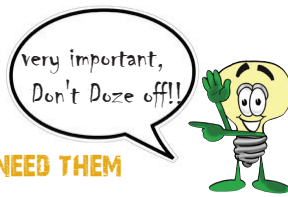
Clean surroundings keep us healthy; they make us feel at peace and lead to happiness.

Things kept neatly in their places make it easy for us to find them when we need them.

Less air, water and land pollution and a healthy, clean environment.

GREEN SPACES

WHAT ARE GREEN SPACES AND WHY DO WE NEED THEM



Green spaces are parks and gardens with trees, plants, flowers and grass. They are the place where we go for recreation, reflection and relaxation. Green spaces improve our health as they are areas where we can enjoy a clean natural environment and fresh air. They provide a home to a large number of birds and animals, insects and plants. They clean the air and give us fresh air full of oxygen to breathe. They keep the air cool and keep the temperature down. They stop topsoil erosion.

EVEN THOUGH THERE ARE MANY ADVANTAGES OF GREEN SPACE MOST OF OUR CITIES LACK THEM, WHY?

Concerned authorities do not realize the need for green spaces or if they do implementation in keeping them clean and green is lacking.

We do not demand green spaces.

We do not do anything to create green spaces ourselves as we feel it is someone else's job to do it.

Even in colonies where land has been allotted for parks there is no greenery, no grass, no trees. A large number of these areas end up as rubbish dumps with plastic bags and garbage.



How can trees help fight air pollution?⁶

- Vegetation purifies the air by removing gaseous pollutants, absorbing them through pores in the leaf surface.
- Particulate pollution is trapped and filtered by leaves, stems and twigs, and is washed to the ground by rainfall.
- Trees absorb carbon dioxide - the main greenhouse gas. One acre of trees can absorb as much as 4 tonnes of carbon dioxide a year, approximately the same amount of carbon dioxide as produced by a car driven 26,000 miles.
- Trees save energy. Shade trees can reduce air-conditioning needs up to 50%. Reduced energy use means reduced energy production and associated pollution.
- Trees store carbon dioxide and produce enough oxygen from one acre for 18 people every day.

AGAIN WE NEED TO ASK WHY



Large green spaces are expensive to create and maintain. Land in cities costs a lot so if it is sold the seller earns a lot of money.

Look around you -

Does your city have green spaces? Do you have a garden at home? Does your school have lawns and gardens?



Activity for juniors and seniors

1. Hold a meeting in your class and discuss what you can do as a group, as individuals?
2. Conduct a brief survey in your neighbourhood to determine the opinion of the residents about parks, find out how they can help.

Activity for seniors

Find out who is responsible for developing and maintaining parks and gardens in your city? How are parks financed?

What are the problems that arise in making the parks attractive and useful?

What plans exist for future park development?

What role does the public have in future park design and development? Write to the concerned authority demanding maintenance of your local park. Meet your municipal counselor and ask for green spaces to be maintained. As a young person, your concerns matters!

If you are all determined to make it happen, it will.

Now that you have made it happen enjoy it. Use it everyday to exercise, play, sit quietly on the green grass and enjoy the cool breeze and the bird songs. Watch the animals play and enjoy themselves.

SMALL STEPS

BIG CHANGE

Create your own green spaces. They may be small, but each little bit counts. Not only do plants purify the air, they also provide a natural habitat for birds, insects and small animals who have been losing their homes to our growing need for housing. So, even if you live in a flat or have a very small garden, do your bit by 'greening' your surroundings. You'll enjoy the results!

1. Ask your principal to allocate a small plot of garden space to your class. Ask your biology teacher to help you identify the best plants to grow in it. Remember, the more leafy a plant, the more oxygen they generate.
2. Create your own potted garden at home. Grow plants that will be easy to maintain and attractive to look at. Plants need air, water, manure and lots of love!
3. Adopt your local garden - get your friends to help you keep the garden clean, and green. You can even take on the responsibility of watering the plants if the gardener isn't doing his job!
4. Don't be a litter bug! Encourage others to throw wastes in bins. No bins in the area? Ask your principal in school and your resident's welfare society in your locality to provide them. But till they do, carry your waste home and put it in your dust bin.

HAVE A HEALTHY LIFE

REMEMBER THE 3 RS

TAKE CARE OF YOURSELF AND
YOUR ENVIRONMENT

BYE





Sanitation, waste management, a clean and green healthy environment, hygiene, good habits etc. are not just topics to be read, discussed, a few activities done and then the chapter is closed and the book kept aside. These, dear friend, are burning issues that concern Your Today, and All Your Tomorrows!

We are talking of the land you live on, the air you breathe and the water you drink.

Is this just another subject or is this really your whole life and future that is being discussed? If you decide, as I am sure you will, that this is too important for you to ignore, then follow the suggestions made in this primer and take the Small Steps to make a Big Change