

Be a Champion Beat the Pollution



Practise 3Rs!

Published in interest of protecting our Environment by awareness amongst children –
Our Responsible Citizens of Tomorrow



रसायन एवं पेट्रोरसायन विभाग

DEPARTMENT OF

CHEMICALS & PETROCHEMICALS

सर्वमन्त्र जयते



PLASTINDIA FOUNDATION®

ISO 9001-2008 certified

Acknowledgment

We are sincerely thankful to Malaysian Plastics Manufacturers Association for giving their valuable support & consent for the inputs in this book.

It's time to act now!

Be the Protector of your environment.



The world produces 1.3 billion tonnes of waste every year.

India is likely to produce above 300 million tonnes of waste per annum by year 2050!



Indian Railways accumulate approximate 7000 tonnes of waste every day

Its time to act now and start Practicing 3 Rs. Its time for every single citizen of the world including you to become responsible and stop littering and reduce, segregate and recycle waste and help save our planet.





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1

What is 3Rs?

**3Rs simply means Reduce, Reuse and Recycle**

There is a need to **reduce** the consumption of natural resources, as well as products that do not meet acceptable environmental standards, increase the **reuse** of materials, avoiding their immediate disposal and finally support the **recycling** of used or post-consumer materials into new raw materials or products, thus reducing the production of waste and saving both energy and non-renewable resources.

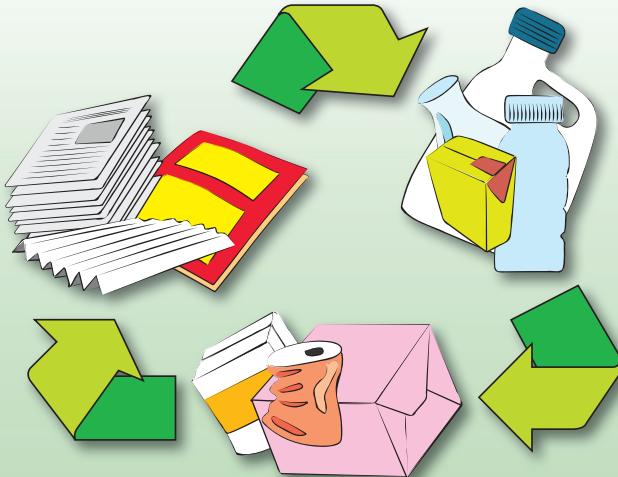
So, the 3Rs are three VERY important ways to manage solid waste. The best approach to effective waste management is one that takes into account all of the waste management options. This is called an integrated approach.

What does an Integrated Waste Management Require?

In order for an effective 3Rs programme to work, emphasis needs to be given to a cost-effective solid waste management system.

Disposal of household waste is a major concern for all if recyclable materials from our homes, schools and public buildings are not segregated at source (separated according to paper, plastic, glass, aluminum, etc).

So what is the solution? We need a cost effective solid waste management system that takes into account an intermediate treatment and final disposal of solid waste with an emphasis on environmental protection and public health.

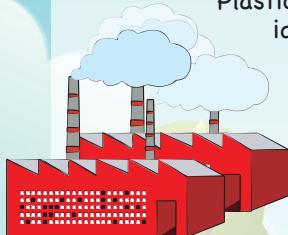


- (i) The setting up of organised efficient and clean waste collection and separation centers or **Material Recovery Facility (MRF)** will assist greatly to minimise the amount of wastes in the country.



This effort will extend the lifespan of landfills, provide source of municipal solid waste for recyclers and recycled resins for fabricators/product manufacturers.

- (ii) Other methods, such as incineration is also important.



Incineration

Plastics, more so than other materials, are ideally suited to **incineration** because they are manufactured from natural oil and gas. Incineration will allow the recovery of some of their energy. This energy can then be used in industrial plants or in municipal heating systems. The whole process of recovering and reusing energy through combustion is called waste-to-energy.

- (iii) What about **Landfills**? Not all materials can be reduced, recycled or incinerated, which means that once they have served their useful life, they may have to be disposed of in a landfill but this should be as a last resort.

Should all waste after going through the 3 R's process end up in landfills?

No! Landfill is just one part of a bigger solution that takes into account all of the different ways to effectively manage solid waste.



Landfill

2

How Can I Help?



You can help by PRACTISING the 3Rs of waste management: Reduce, Reuse, and Recycle!

It is not only important to care for the environment, but it can also be fun too!

The easiest, most direct way for you to make a difference is to watch what you buy and throw away. You can do this by following these basic principles:

- **Reduce** the amount of trash you discard.
- **Reuse** containers and products; repair what is broken; and give items that you no longer need to those who can reuse them.
- **Recycle** as much as possible and buy products with recycled content.

What Should I Do?

Reduce

Reuse



Recycle



3

How Do I Start the 3Rs in My Home and School?



The amount of waste that comes from one neighbourhood on a daily basis is enormous.

We should aim to recycle most of this waste because the more we practise the 3Rs, the more we can cut down the waste generated.

It takes time to cultivate a habit of 3Rs. What you can do to develop this habit is to start small. Here's how...

I. Reduce your waste

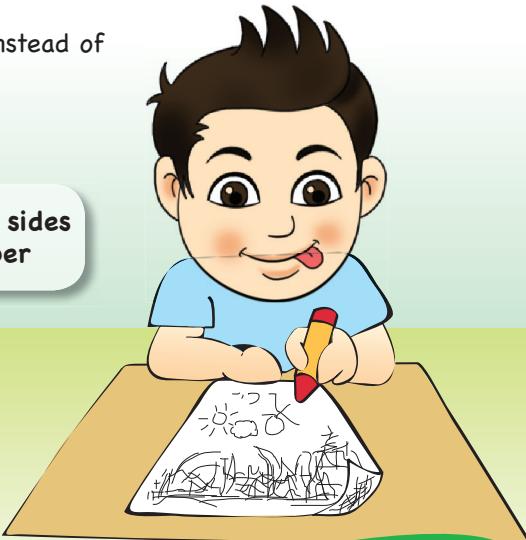
- Reducing waste simply means not producing as much of it in the first place.

There are many simple ways that we can do so every day in our homes and schools.

- Here are some examples:

- Reduce the amount of paper waste you produce by writing on both sides
- Reduce battery waste by using solar powered calculators
- Reduce packaging by using a lunchbox, avoiding over-packaged food at lunchtime
- Pre-plan your meals, buy in bulk, and prepare what you need
- Rent or borrow instead of purchasing

Draw on both sides
of the paper



II. Reuse at least once

Instead of throwing old items away, try to reuse as much of your old things as possible.

Give away old books instead of throwing them away



- Bring your own bottles and food containers when you take away food. This helps eliminate the need for new containers.
- You could also re-use mineral water containers or soft drink bottles to store drinking water. You may also cut the bottle in half and use as pots.
- Ice cream and other food containers can be reused to store cakes, keys, small toys and others.
- Beautiful and colorful glass or plastic bottles can be reused as vases.
- Empty milk and drink cartons can also be reused creatively in a number of ways around the house and garden. For example, you can use cartons:
 - For growing seedlings
 - As pencil holders
 - For craft activities
- Your old curtains can be cut and used as rags, or donated to charity.

Reuse unwanted glass/plastic containers as vase or pencil holder



III. Recycle everything that you can

Don't dump electrical items. Instead, send old computer, equipment, mobile phones, etc to identified recycling collection centres.

You can even collect recyclables and sell to the recycling centres and earn money for your school!



Put the recyclables in one bin and other wastes in another.

Your recyclables can then be separated further according to their categories.

It is advisable to clean them properly before handing it out to the relevant collectors.

Get Your Family in the Act!

The best way to ensure that your recycling programme at home and school is successful is to get **EVERYONE** involved. Get your family members, neighbours, teachers and school friends in and show them the benefits of practising the 3Rs can help the environment. Once they know the immediate benefits, they will be more than happy to pitch in!



Two important things that will make the 3Rs more effective.

Stop littering

The waste generated by littering clogs our drainage systems creating more pollution within our neighborhood. The litter ends up polluting our rivers and oceans in a big way which damages the entire ecosystem.

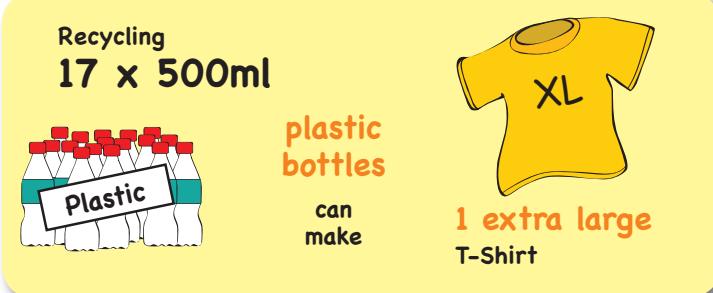
The impact of littering – even if it means small wrappers, bags, pouches is huge. It needs to be stopped immediately.

Segregate waste

Most of the waste we generate can be recycled. But only if it is segregated properly. Waste segregation needs to start from home and it is simple. All you have to do is have 2 waste bin instead of 1. One waste bin must be for Dry Waste which would have plastic, paper etc. and the other bin should be for Wet Waste for your left over foods, vegetable discards etc. Dry waste then goes for recycling. But the same dry waste cannot be recycled or does not go for recycling when it is mixed with the wet waste. Educate your maid, servant or tell your parents and friends to follow the waste segregation. It is simple.

4

Why Do I Need to Recycle?



India generates approximately 144,000 tonnes of waste every day which mostly end up in landfills, rivers and the sea. It is only a matter of time before we run out of landfill space to dispose the waste.

- Recycling or making new things from recycled ones takes a lot less money, much less energy, and saves a lot of the Earth's natural resources, thereby helping the environment.
- Recycling also saves space in landfills. Instead of your garbage being thrown away and taking up space, it's better to recycle it.
- The energy saved by recycling also results in less pollution.
- Recycling improves cleanliness and quality of life.

RECYCLING...

- Conserves our valuable natural resources
- Saves energy
- Saves clean air and clean water
- Saves landfill space
- Saves money and creates jobs

SAVE YOUR PLANET BY RECYCLING!

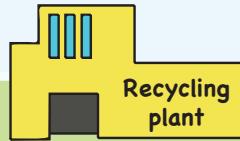
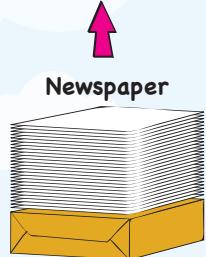


X "Be eco-alert and don't throw other waste in the recycling bins which are meant to collect only Paper, Aluminium, Glass and Plastic waste"





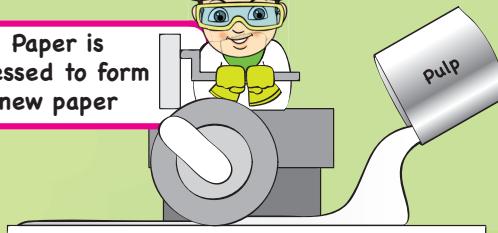
PAPER



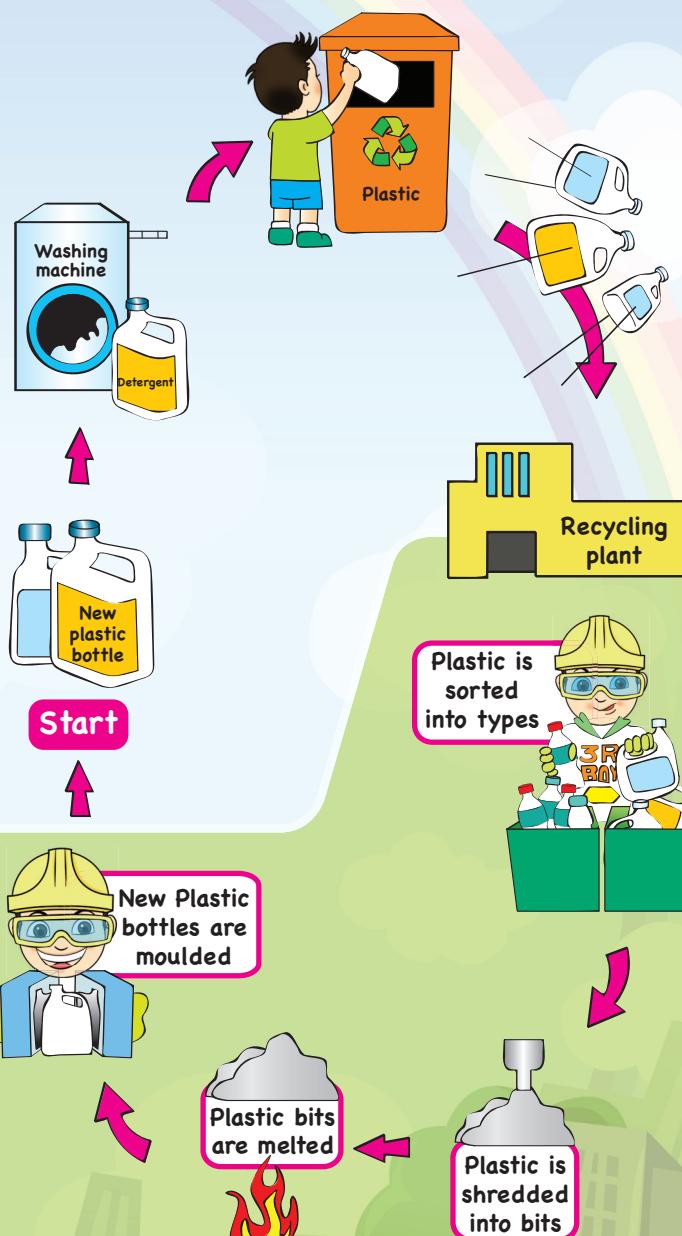
Paper is mixed with water to form pulp



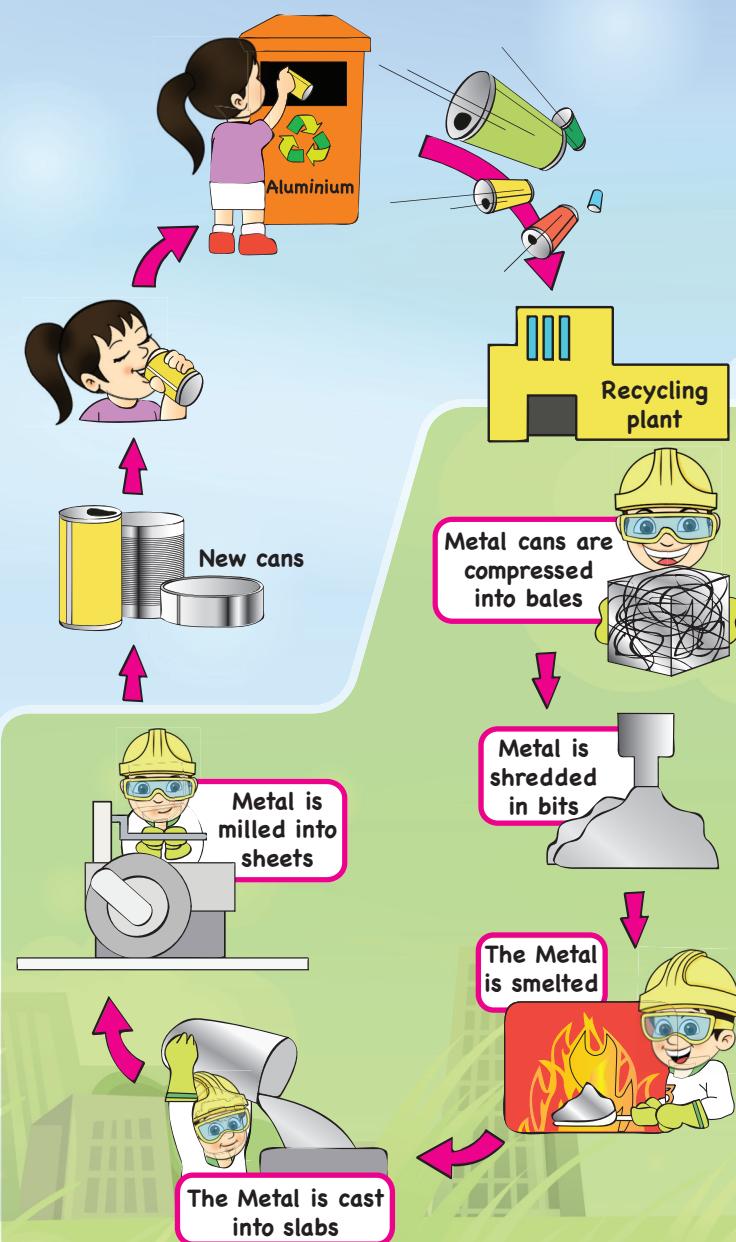
Paper is pressed to form new paper



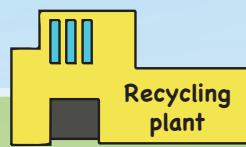
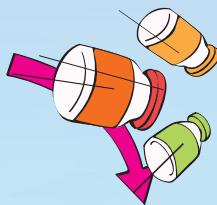
PLASTIC



ALUMINIUM



GLASS



Glass jars and bottles are crushed



Glass bits are melted



New glass jars and bottles are moulded



Myths & Reality of Plastics



There are countless myths about plastics which many a time end up giving an incorrect impression to people, not factual, some of them are:

Myths

Plastics should not be used for Food contact, Pharmaceutical and drinking water applications

Reality

Almost all the plastic materials are approved for Food contact, Pharmaceutical and drinking water applications and they are quite safe.

Plastics cannot be recycled

Most of the Plastics are totally recyclable. Some are even recycled two to three times. This helps conserve natural resources.

Plastic packaging is a major source of our litter problem

Litter of used plastic, wrappers, pouches is due to poor disposal habits and practices, not because of packaging. Plastic packaging reduces wastage of material, protects products and ensures freshness.

Plastic are non-biodegradable

Plastics are made to protect items packed for long periods and safe transport. Other materials like glass and metals are also used which are non-biodegradable and make economic sense. Biodegradability cannot be primary virtue for packaging material nor an answer to litter & waste disposal problems.

7

Do not litter. Recover, Re-cycle and Re-use plastics.



Recycled Plastics are now being put to good use. In India, more than 10,000 km of roads have already been built made out of waste Plastic. These roads are more tougher than traditional roads.

Beat the Pollution

Recover, segregate, recycle and reuse waste.



We can take care of our Environment by



Be a champion. Beat the pollution.

चैंपियन बने प्रदूषण को हराएं।
चैंपियन बनां प्रदूषण पराभूत करा.
चैंपियन जनों प्रदूषणाने हरावो.
छुरु शाम्पीयन् आक मास्पाटि
ઓક વિજેત કાલુદ્વારો બીટ ચેર્યોંડી

For guidance please contact
environment@plastindia.org & icpe@icpe.in



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DEPARTMENT OF
CHEMICALS & PETROCHEMICALS

401, Landmark 'B', Suren Road, Off Andheri Kurla Road, Andheri (E), Mumbai - 400 093, India.

Tel.: +91-22-26832911 / 14 • Fax: +91-22-26845861 • E-mail: info@plastindia.org
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