

PROJECT WORK

CLASS: IX

SUBJECT: BIOLOGY

LESSON: SOIL POLLUTION

NAME OF THE PROJECT: REFORM PLASTIC WASTE

STRATEGY: GROUP

GROUP LEADER:

GROUP MEMBERS:

WORK DIVISION

SN	GROUP MEMBERS	DIVISION OF WORK

GUIDE TEACHER: K. MANJULA, SA(BIO)

ALLOTTED DAYS: 7-8 DAYS

SAY NO TO PLASTIC!



AIM: To study about the implications of plastic waste on environment and its management.

OBJECTIVES:

- To collect the plastic waste from our colony for a week.
- To calculate the extensiveness of plastic waste per year by our colony.
- To collect information about influence of plastic waste on the environment from our teacher with the help of questioner.
- Also collecting some more information from the internet.
- Analyzing the adverse effects of plastic waste.
- Concluding the preventive measures and plastic waste management

TOOLS:

- Table showing the plastic waste materials.
- Questioner to our teacher.

PROCEDURE: We have learnt about soil pollution and its effects on environment and the existence of life. When we discussed about the reasons for soil pollution, it is concluded that the plastic waste occupy a major portion that damage the fertility of the soil and thus the biodiversity. At this context we decide to undertake the project of reuse of plastic waste to make it meaningful. As the first step we collected the plastic waste from our colony and tabulated the details as follows.

**PLASTIC THINGS
CONSIDERED AS WASTE**

1. Water bottles
2. Cool drink bottles
3. Packed baskets of sweets
4. Plastic containers
5. Use & throw cups and spoons
6. wrappers



We calculated extensiveness of the waste material of plastic generated in our colony.

CALCULATION:

The weight of the plastic waste collected in our colony per month = 20 kgs

Then the average weight of these waste per year in our colony = 240 kgs.

The average 240 kgs of waste is generated per year from our colony. It made us panic when we imagine the waste generated in our country. So we decided to find out a way to manage this waste material to bring out a meaningful outcome. We approached our teacher and discussed about the generation of plastic waste and its implications on the environment. And also discussed about the waste management.

QUESTIONER

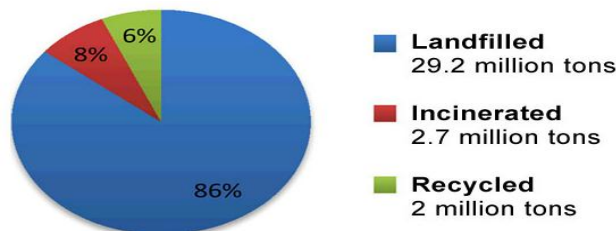
1. **What are the effects of plastic waste on the environmental pollution?**
 - The plastic is not a biodegradable material. So it sustains in the soil, if it is thrown as waste. if it is burnt it releases poisonous substances into the atmosphere and leads to the pollution. It creates an imbalance in our environment.
2. **What is the solution to this problem created by plastic waste?**
 - The best method is to reduce the waste. In case if the waste is generated it can be managed by adopting the waste management techniques.
3. **How can we reduce the usage of plastic?**
 - If we can switch on to the paper bags, degradable wrappers, etc we can reduce the plastic usage. In case if usage cannot be skipped we can reuse the same for same or other purposes.
4. **How can we reuse the waste plastic things?**
 - We can add our creativity in reusing the waste. We can make pen stands, pots, organizers or any other decorative items.

We also collected some information regarding the adverse effects of plastic wastes on the environment from environment and aggregated as follows.

INTRODUCTION: As the world's population continuous to grow, so does the amount of garbage that people produce. Today's life styles require easily disposable products, such as soda cans or bottles of water, etc. Man artificially makes plastic by using a number of toxic chemicals. Use of and exposure to plastics has been linked to a number of health concerns affecting people around the world. The accumulation of these products has led to increasing amounts of plastic pollution around the world. As plastic is composed of major toxic pollutants, it has the potential to cause great harm to the environment in the form of air, water and land pollution.

EFFECTS OF PLASTIC POLLUTION: The accumulation of plastic havoc on natural environments and leads to along term issues for plants, animals and people. Some of the major long term effects of plastic pollution are as follows.

1. **It upsets the Food chain:** When the small organisms become poisoned due to plastic ingestion, this causes problems for the larger animals that depend on them for food. This leads to bio-accumulation and bio-magnification.
2. **Ground water pollution:** The leakage of plastic is throwing the world's water in great danger. Ground water and reservoirs are susceptible to leaking environmental toxins. Most of the oceans are also being polluted due to plastic wastes. This has terrible consequences on many marine species, which can lead to consequences for those that eat fish and marine life for nutrients.





3. **Land pollution:** When plastic is dumped in land fills, it interacts with water and form hazardous chemicals. When these chemicals seep underground, they degrade the water quality. Wind carriers and deposits plastic from one place to another, increasing the land litter. It can also get stuck on poles, traffic lights, trees, fences, tower, etc and animals that may come in the vicinity and might suffocate them to death.
4. **Air pollution:** Burning of plastic in the open air, leads to environmental pollution due to the release of poisonous chemicals. The polluted air when inhaled by humans and animals affect their health and can cause respiratory problems.



ANALYSIS: Plastic pollution is nothing but gathering of plastic waste in an area and creating negative impact on the natural environment. It creates problems for plants, wild life and even human population. Plastic is an incredibly useful material, but it is not made from toxic compounds known to cause illness. Because it is meant for durability but not degradable. Today's world has deeply uprooted into the usage of plastic things so as from coffee cups to food containers. But the nature is not a dust bin to throw all these garbage into it. Here notes our genius thinking which has to lead us towards environmental protection. Then rises the question to manage these plastic waste to make it useful means.

CONCLUSION: There is a hierarchical criteria for plastic waste management. Our first concern should be towards reduce it. If it cannot reuse, recycle and reform. So there are so many solutions for plastic pollution. The top tips of reducing plastic wastes are ..

- **Shop friendly:** Plastic bags were once a modern convenience but can be efficiently replaced by reusable bags, many of which fold up compactly in order to be portable.
- **Get Rid of Bottled water:** Now it has become a trend to use water bottles even in functions such as marriages, ceremonies, etc. At the end these plastic bottles are going to be the trash as these are recommended for single use. So it's better to adopt reusable bottle
- **Reusable containers:** Plastic food containers, lids and utensils are all easily replaced by reusable containers. So it is advised to switch on to reusable containers.
- **Creativity marks:** One can raise their creativity to bring about the useful, decorative meaning to plastic waste.



OUR EXPERIENCES: When we learnt about the adverse effects of plastic waste on the environment, it made us panic about our environment. We took an oath that we never generate plastic waste and treat the environment with aesthetic sense and values.

QUESTIONS RAISED:

- Are there any institutions to promote the art and crafts from waste material?
- What are the eco-friendly activities to maintain our environment naturally.

ACKNOWLEDGEMENT: We thank our guide teacher, K.Manjula mam for her proper guidance.

RESOURCES: Teacher and internet.