



Parvatibai
Chowgule College
of Arts and Science

ZOOBUZZ...



Newsletter of Department of Zoology

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WHATS BUZZING AT THE DEPARTMENT

INTRODUCTION

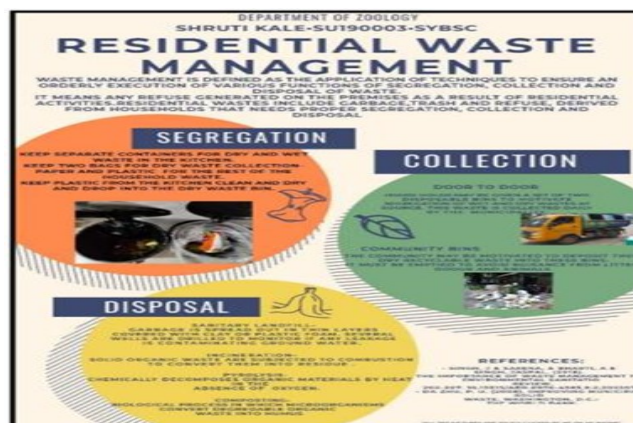
The Department of Zoology of Parvatibai Chowgule College of Arts & Science (Autonomous) actively conducts Green initiative/ Environment protection initiatives by students of SEC course on waste management techniques under the guidance of Dr. Nandini Vaz Fernandes, Ms. Madhu Balekai, Ms. Tessa Vaz & Ms. Gautami Manakikar. This academic year, 2020-2021, the SEC students designed E-posters in order to create awareness on the various Waste Management techniques. The students used posters to explain about the adverse effects caused on the environment and human health by the waste generated. They also created awareness on the different sources of waste and how one can segregate and dispose the waste safely without harming the environment. They emphasized on the hazardous effect of E-waste on the environment and suggested methods of disposing the E-waste generated. The main aim of this activity was to reignite the awareness regarding the ill aspects of improper waste management. Here are some selective E-posters done by the students.

Waste management refers to the activities and actions adopted to manage and dispose of wastes. It can be by discarding, destroying, processing, recycling, reusing, or controlling wastes. The prime objective of waste management is to reduce the amount of unusable materials and to avert potential health and environmental hazards.



Done by Tahoor Shaikh

Residential waste management: It's a domestic waste generated in houses and apartments. The three main actions required to manage the residential wastes are **SEGREGATION, COLLECTION and DISPOSAL**.



Done by Shruti kale

Department of Zoology
Ways of managing waste.
Name: Giselle Fernandes
Roll no. SU190005
Class: VYBSC



Done by Giselle Fernandes



"The Greatest threat to our planet is the belief that someone else will save it." - Robert Swan

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EDITORIAL: Covid-19 and waste management



In the view of the current COVID-19 pandemic, spread of virus, cleanliness and hygiene and waste management is important issues to look upon. The containment of the spread of COVID-19 pandemic and limitations on commercial activities, mobility and manufacturing sector have significantly affected waste management. Waste management is critical to human development and health outcomes, especially during the COVID-19 pandemic. Though the COVID-19 pandemic is reported to have reduced air pollution and environmental-related noise and improved biodiversity and tourist sites, however, the impact of stay-at-home and preventive measures on waste management is alarming.

There has been increased usage of single-use products and other products like gloves, gowns, masks and other protective clothing and equipment has increase the concern of these waste management. Failure to properly manage the waste generated from health facilities and households may escalate the spread of COVID-19 via secondary transmission. And therefore one should practice good hygiene, innovate and redesign household products to improve the durability, reusability and recyclability while ensuring safe use with proper sanitization measures. Also adapt safe disposable methods which would reduce the pressure on the environment.

E-Waste management: E-waste are loosely discarded, surplus, obsolete, broken, electrical or electronic devices. This waste contains toxic components that are dangerous to human health and environment and therefore a proper E-waste management is necessary such as open incineration and acid-leeching.

Medical Waste management: Medical waste is broadly classified as any item that comes into contact with body fluids. Specifically, it is any solid waste that is generated in the diagnosis, treatment or immunization of humans. The most successful medical waste disposal methods are: Autoclaving, chemical disinfection, encapsulation.

Name: Mayuri Verlekar
Roll No.: SU190296
Department: Zoology

MEDICAL WASTE





INTRODUCTION

Medical waste is the waste that contains potentially infectious material. This waste includes waste that is generated by healthcare workers like hospitals, laboratories or medical research facilities.

Effects of medical waste

- Soil, air and water contamination
- It can lead to the spread diseases like HIV, Tuberculosis, hepatitis.
- The radioactive elements can seep in the ground water through the landfill and can led to serious diseases.

How can we handle medical waste?

- Know the healthcare waste rules regulated by DOE, EPA, OSHA and DEA.
- Avoid putting non-hazardous waste in with rest to prevent confusion.
- Separate waste based on sharp, pharmaceutical, chemical, pathological and non-hazardous.
- Use the medical waste disposal color code.

HOW CAN MEDICAL BE TREATED?

Treatment methods include:

- Incineration
- Autoclaving
- Microwaving
- Chemical treatment
- Biological treatment

CONCLUSION

Incineration of biomedical waste is one of the techno-economic viable scheme. Individual awareness and participation is utmost management is very important. Safe and effective management is not only a legal necessity but also a social responsibility.

REFERENCE: Unknown (2020). What Is Medical Waste? Definition, Types, Examples & More Retrieved from MedPro Hub <https://www.medprodisposal.com/medical-waste-disposal/what-is-medical-waste-definition-types-examples/>

Done by Mayuri Verlekar

"Refuse what you do not need; reduce what you do need; reuse what you consume; recycle what you cannot refuse, reduce or reuse; and rot (compost) the rest.." - Bea Johnson

Organic composting

Organic composting mainly reduces the amount of organic waste generated. It cuts down the usage of chemical fertilizers and is used to remediate soils contaminated by hazardous waste. The students were explained the basic concept of organic composting and were given instructions on how to prepare kitchen compost effectively at home. The main aim of this activity was to encourage the students to use and promote organic composting as an ideal way of managing kitchen waste.

E-WASTE MANAGEMENT

NAME: CHIRRA BHAVI
ROLL NO: 20000000000000000000

DEPARTMENT OF ZOOLOGY

WHAT IS E-WASTE?

E-waste, also known as e-scrap, is the term given to old mobile phones, laptops, desktop computers, and other electronic devices that are no longer used. These electronic devices are produced in the thousands of millions each year, and many of them are thrown away as waste.

LIST OF COMMON E-WASTE ITEMS

Mobile phones
Mobile phones are one of the most common types of e-waste. They contain a variety of hazardous materials, including lead, cadmium, and mercury.

Computers and laptops
Computers and laptops are another common type of e-waste. They contain a variety of hazardous materials, including lead, cadmium, and mercury.

Printers and scanners
Printers and scanners are also common types of e-waste. They contain a variety of hazardous materials, including lead, cadmium, and mercury.

Other electronic devices
Other electronic devices, such as televisions, refrigerators, and air conditioners, are also common types of e-waste. They contain a variety of hazardous materials, including lead, cadmium, and mercury.

WASTE MANAGEMENT

Waste management is the process of managing waste from its creation to its disposal. It involves a variety of activities, including collection, transportation, treatment, and disposal.

Technological advances are helping us to deal with e-waste in a more sustainable way. A lot of e-waste is now being recycled, and new technologies are being developed to make recycling even more efficient.

PC Monitor → Inkjet Printer → Video Camera → Laptop → Mobile Phone

Waste is not uncontrollable, it is human-made. In our day-to-day activities, we generate waste. Some of this waste is hazardous, and it can be harmful to the environment if it is not managed properly. This is why it is so important that we have a system in place to handle this waste.

TOXIC CONSTITUENTS IN E-WASTE

| Constituent | Location | Health Effects |
|----------------------------------|---------------------------|----------------------|
| Lead | Lead-based solder | Lead poisoning |
| Mercury | Mercury switches | Mercury poisoning |
| Cadmium | Cadmium plating | Cadmium poisoning |
| Chlorine | Chlorine-based solvents | Chlorine poisoning |
| Fluorine | Fluorine-based solvents | Fluorine poisoning |
| Phosphorus | Phosphorus-based solvents | Phosphorus poisoning |
| Sulfur | Sulfur-based solvents | Sulfur poisoning |
| Polychlorinated Biphenyls (PCBs) | PCBs in capacitors | PCBs poisoning |

Effects of E-Waste Toxins

E-waste toxins can have a variety of effects on the environment and on human health. They can be toxic to the environment, and they can be harmful to humans if they are inhaled or ingested.

Lead is one of the most common toxins found in e-waste. It can be harmful to the environment, and it can be harmful to humans if it is inhaled or ingested.

Mercury is another common toxin found in e-waste. It can be harmful to the environment, and it can be harmful to humans if it is inhaled or ingested.

Cadmium is a third common toxin found in e-waste. It can be harmful to the environment, and it can be harmful to humans if it is inhaled or ingested.

Chlorine and fluorine are also common toxins found in e-waste. They can be harmful to the environment, and they can be harmful to humans if they are inhaled or ingested.

Polychlorinated Biphenyls (PCBs) and sulfur are also common toxins found in e-waste. They can be harmful to the environment, and they can be harmful to humans if they are inhaled or ingested.

Management of E-Waste

There are a number of ways to manage e-waste. The most common way is to recycle it. This involves collecting e-waste and sending it to a recycling facility.

Another way to manage e-waste is to incinerate it. This involves burning e-waste in a controlled environment.

A third way to manage e-waste is to landfill it. This involves burying e-waste in a landfill.

There are a number of challenges associated with managing e-waste. One of the biggest challenges is the sheer volume of e-waste that is generated each year.

Another challenge is the fact that e-waste is often mixed with other types of waste, making it difficult to separate and manage.

Despite these challenges, there are a number of ways to manage e-waste more effectively. One way is to encourage people to recycle their e-waste.

Another way is to encourage people to use e-waste responsibly. This means not throwing away e-waste carelessly, and instead, taking steps to ensure that it is managed properly.

By taking these steps, we can help to reduce the amount of e-waste that is generated, and we can help to ensure that the e-waste that is generated is managed in a responsible and sustainable way.

There are a number of organizations that are working to address the challenges of e-waste management. These organizations are working to develop new technologies and policies to help manage e-waste more effectively.

By working together, we can help to ensure that e-waste is managed in a responsible and sustainable way, and we can help to protect the environment and human health.

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CONCLUSION

Managing e-waste is the best method of managing the waste.

We can protect our environment by managing e-waste.

We can protect our health by managing e-waste.

We can protect our future by managing e-waste.

We can protect our planet by managing e-waste.

We can protect our world by managing e-waste.

We can protect our lives by managing e-waste.

We can protect our future by managing e-waste.

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We can protect our future by managing e-waste.

Done by Sarha Khan

PROCEDURE OF COMPOSTING



1000 ml
Dry leaves
Garden soil
Kitchen waste

MATERIALS REQUIRED

→



**STEP 1: ADD A LAYER
OF DRY LEAVES**

→



**STEP 2: ADD A LAYER
OF GARDEN SOIL**

↓



**STEP 4: ADD A LAYER
OF DRY LEAVES**

←



**DURING THE PROCESS
OF KITCHEN
COMPOSTING**

←



**STEP 3: ADD KITCHEN
WASTE**

Organic composting cont.



PROCEDURE OF COMPOSTING



Corona-virus pandemic- Opportunity to learn something new

Article written by : Shanaya S Phal Desai, SYBSc

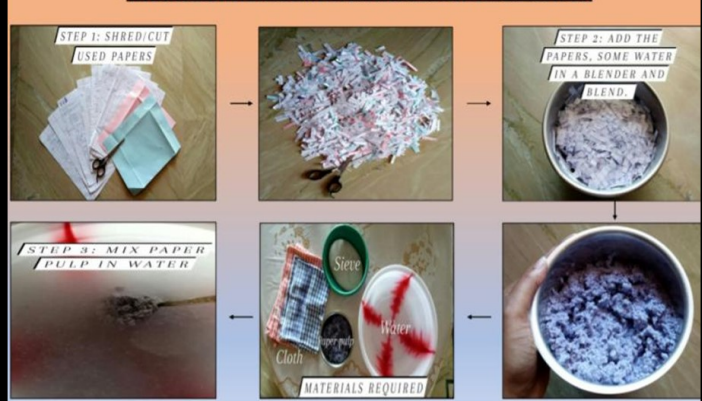
The 21st century pandemic, something unexpected and most devastating event that would be remembered for centuries. A condition that took away thousands of dreams, devastated thousands of families and meeting people and moving out had a cost of our lives. Amidst this heart wrenching situation the only thing that kept people going is hope and faith that someday everything will fall back at its place. We weren't prepared for such a world where are homes would be workplaces and communication to near ones will be long distance. The only way to deal with sudden halt in our lives was re- engaging. The pandemic ensured that learning never stopped and so growth and creativity. Despite of the struggling conditions, our young minds didn't fail to lighten up and to utilize this extra hours into learning that had never occurred before. The pandemic gave us so much time to reflect on our thoughts, to find our hidden talents and interests. Talking about me, the travelling, college and hangouts left very little time to ponder upon my interests. for instance, I was never much into cooking or baking stuff but since all the scientific labs were closed, the kitchen was the only lab you could experiment!

Handmade paper

As handmade papers are made from recycled papers, it is an effective method of decreasing the amount of waste generated. The use of recycled paper also reduces the number of trees cut down and promotes sustainable development. Handmade paper can be used to make diverse products such as bags, diaries, envelopes, packaging, office accessories and even cards. The students were given instructions on the process of handmade paper and encouraged to create various products using it. The main aim of this activity was to promote recycling paper and reduce the amount of waster generated.



PROCEDURE OF MAKING HANDMADE PAPER



Cont..

I generated interest in baking and trying different cuisines. I have always wanted to learn a western musical instrument but long college hours and studying never really helped. The pandemic was the time I learned to play the guitar. My mind and soul having no escape from the closed walls of my home had led to often irritation and frustration.

That's when I tried engaging myself into meditation and Yoga. Something I never thought I would include in my daily routine. The pandemic helped me generate a healthier



lifestyle than before. Gardening became another activity that helped me feel calm and happy. Watching new life grow, the vibrant flowers added colours to a monotonous life after months of lockdown. Since I had more free time than ever, I could catch back my hobbies of reading novels, fiction and creative writing.

To sum up with, the Covid-19 pandemic taught us how insignificant we are in front of the nature and how temporary everyone around us is. I started looking at life with a new perspective trying to utilize every minute and be grateful about it. From being happy to be able to spend more family time to catching up with lost feelings. Even though the pandemic took away uncountable college memories to look at the brighter side, it also gave us opportunity for self-care and opening up to so many interests and creativity within our homes.

Corona-virus pandemic- Opportunity to learn something new

Article written by : Neeha Sinai Borker, TYBSc

Learning is a matter of your interest and will power to gather knowledge. Circumstances pose little to no challenge for those with sheer zeal and passion for learning. Being an extrovert, who enjoys group discussions and group learning, Covid 19 pandemic made me realize the importance of "traditional form of learning" through physically attending lectures in classrooms, interacting with teachers, having group discussions with peers and socializing through live interactions. While the mode of "online learning" was expected in the near future out of choice, never did I imagine it would be a part and parcel of our life out of compulsion.

Cont....

My experience with this virtual mode of learning has been a macabre of mixed emotions. During these difficult times, Google meet and Zoom app have become our best friends and aided us in attending online classes. Online resources in the form of power point presentations, e-books, web links and You Tube videos were made available by our college faculty for understanding difficult concepts.

Online discussion forum served as an inquisitive to solving student queries. The current pandemic gave rise to numerous internship and work from home opportunities and being part of one such internship helped in improving my communication skills and learning new software languages.

This was my first trip abroad, along with my friends and I couldn't be more thrilled to chose Sweden as my first destination . I have always wanted to visit a European country and my uncle , who is a frequent visitor to Sweden, spoke fondly about Swedish culture and places worth visiting.



Running a personal blog 'NB Diaries'

Attending a series of webinars broadened the horizon of opportunities and aided in career guidance and public awareness on current affairs. Keeping a positive mind-set, I tried to make the most out of this new form of learning, channelling my creativity and imagination skills and polishing my reading skills to my level best. This mode of learning in fact strengthened my discipline as one tends to become lethargic.

Being a Final year undergraduate student, my main concern was my research project as I was looking forward to what I thought would be my most exciting part of learning and a new opportunity similar in lines to my career path. Once again, our best friend Google saved the day and the concept of secondary data analysis did relieve my anxiety and gave rise to a new opportunity of learning. A major downside of this mode of learning would be limitations to polishing our practical skills. Nothing would compensate the practical skills which we fell short of, during this pandemic and competitive offline job markets in near future.

While the current Covid-19 pandemic has caused worldwide crisis and growing economic and social disruption, it has solidified the notion of social connectivity of the world through nuance of internet, as the near future predicted it to be.

EDITORIAL BOARD: Department of zoology

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