



Guru Nanak College (Autonomous)

(Affiliated to University of Madras & Accredited At "A++" Grade by NAAC)

No. 161, Guru Nanak Salai, Velachery, Chennai – 600042, Tamil Nadu

Website: www.gurunanakcollege.edu.in

GURU NANAK COLLEGE INITIATIVES FOR GREEN CAMPUS AND ENVIRONMENTAL PRACTICES

Best Practice - 2

BEST PRACTICE -2

**GURU NANAK COLLEGE INITIATIVES FOR
GREEN CAMPUS AND ENVIRONMENTAL SUSTAINABILITY PRACTICES**



ENVIRO CLUB

Vision:

To raise consciousness among young learners and educators regarding various environmental issues, as well as the nurturing nature and natural resources. The club is committed towards raising social awareness regarding environmental issues and change students' attitude towards the environment by engaging their active participation in club's activities.

Mission:

To educate students that it is their responsibility to take action to protect the environment.

To teach simple remedial measures that will reduce the environmental pollution.

To foster an eco- friendly attitude.

Objectives:

- To create Environmental Awareness among the Students for sustainable Environmental management
- Motivate the students to keep their surroundings green and clean by undertaking plantation of trees
- To develop skills on Green survey, documentation of environmental resources through activities
- Motivate students to minimize the use of plastics and other non-degradable materials to reduce pollution

Tree Plantation in Guru Nanak College's Campus

Department of Plant Biology and Plant Biotechnology has organized Tree Plantation on October 14th, 2018 in our Guru Nanak College's Campus. Some interesting endemic and red listed trees collected from western Ghats were planted. The trees planted are *Artocarpus hirsutus* (Wild jack), *Saraca asoca* (Asokha tree), *Oroxylum indicum* (Broken Bones Plant) and *Vateria indica* (Indian Copal Tree).



Dr. Thol. Thirumamavalavan (an Indian Politician and Tamil activist, Member of Parliament in 15th Lok Sabha) planted *Saraca asoca* (Asokha tree)

Field visit – In Guru Nanak College campus

Field visit for Plant Biotechnology students reinforces what a teacher has been explaining in class about various concepts and help students understand the topic better. It also cultivates an interest among the students to observe the plants in their close proximities and understand the Taxonomy of the plants. 37 Allied Botany students of Semester I were assisted by Dr. A.C Tangavelou on 10th December, 2018. In the beginning, they were briefed about identifying the plant and explained how to identify the plant kingdom and also helped the students to understand practically about Habit, Habitat and morphology of the all the Plants in the college campus was one of the main purposes of the visit.



Department of PBPBT and Zoology learning the GNC Campus flora

Velachery Lake Cleaning Campaign

The Enviro Club of Guru Nanak College conducted a campaign on Velachery lake and water bodies cleaning an Environmental Awareness program from 10.07.2019 to 20.07.2019, in College level. The aim of the campaign is to clean the litter around the Velachery lake and water bodies in general, elimination of water hyacinth weed and to bring the issue to the public's attention through concrete activities.



Enviro Club students involved in cleaning the plastics around the Velachery lake and remove water weed.

Guru Nanak College Campus Cleaning Campaign

The Enviro Club of Guru Nanak College conducted a Campus Cleaning Campaign in our campusan Environmental Awareness program on 21.08.2019. The major objective was to familiarize the students with the flora and ecology of the region. Also, to acquaint them with the importance of plants and the threats these ecosystems face due to natural and anthropogenic pressures. It will provide a safe, clean, a friendly and caring environment. It improves hygiene level in campus and also helps to reduce the spread of sickness.



Enviro Club students involved in removing the plastics in GNC campus.

Green Auditing 2018-2019

Green auditing is a means of assessing environmental performance. Guru Nanak College is one such green space located in Chennai; the detailed campus flora was studied by PBPBT Semester IV students Mr. Koushik Srinivas and Elakiyan.

The students aimed to study and understand the changes in the flora over more than 2 years since the publication of the first study. For this, we assessed the total current species richness in the campus and compared it with past Flora Auditing results. Also, a detailed unified inventory of all the vascular plants that are recorded till date in the campus is provided with notes about historical status, rarity, and ecological remarks.



**Enviro Club students involved in documentation of GNC campus flora for Green auditing.
Totally 162 plant species belongs to 136 Genus, 53 Families were documented in our campus.**

Mushroom Cultivation- Workshop

Department of Plant biology and Plant Biotechnology and Enviro club organized one day workshop sponsored by **DBT- Star College scheme on Mushroom Cultivation** for Life science students of GNC.

Dr. Nagaraj, Assistant Professor Department of Center for Advance Studies, University of Madras Inaugurated the workshop and motivated the students, about the importance and innovation of mushroom cultivation technology. He said that the present production of mushroom in India is 1.0 million tons /year out of 7.0 million tons produced all around the world. He also mentioned the spawning procedure of paddy straw mushroom on cotton seed hull substrate.



One day workshop on Mushroom Cultivation was conducted to develop Mushroom food Industry. Dr. Nagaraj, Assistant Professor, Center for Advance Studies, University of Madras delivered the speech.

Tree Plantation - 2019

The Guru Nanak College to commemorate the 550th birth anniversary of Shri Guru Nanak Dev Ji celebrated a Go Green Initiative by planting sapling's on September 5th 2019. Our College has a long-standing tradition of preserving culture, heritage and flora and fauna in the campus.

In order to sensitize students towards the need to preserve our environment, Tree plantation drives were organized. The lions Club International support the program.



Tree Plantation was conducted in collaboration with Lion's Club to commemorate the 550th birth anniversary of Shri Guru Nanak Dev Ji to preserve our GNC campus flora.

Seed for your Future (Seed Balls Preparation)

Adding a touch of innovation into environmentalism, a group of ‘green soldiers’ have taken up an awareness campaign with the unique idea of preparing seed balls. As many as 15733 seed balls were readied on the grounds of Guru Nanak College Campus on 21.09.2019 by students of PBPBT, AZBT, Enviroclub, NSS NCC and NGOs volunteers for scattering in the countryside as part of their extension activity. The Event was inaugurated by college President Sardar Rajinder Singh Bhasin in the presence of Principal Dr. M.G. Ragnathan and Enviro club Coordinators Dr. M. Gopi and Dr. S.S. Jayaraj. Dr. M.G. Ragnathan, Principal highlighted the importance of seed balls in natural farming technique which contains plant potential for an entire ecosystem. This event was held jointly by Vidiyal Charitable Trust, Rudambara Yoga trust, Annakkili Ammal Research Institute and Sevalayam NGOs.



Enviro Club with students of PBPBT, AZBT, NSS, NCC and NGO volunteers prepared 15733 seed balls of our native plants
Event was inaugurated by our college former **President Sardar Rajinder Singh Bhasin** and **Principal** highlighted the importance of seed balls
This event was held in collaboration with **Vidiyal Charitable Trust, Rudambara Yoga trust, Annakkili Ammal Research Institute and Sevalayam NGOs.**

CommuniTree in name
The North Chennai's First Man Made micro FOREST
(Miyavakki Forest)

The CommuniTree program grew out of the need to promote tree planting, after-planting care and maintenance of trees. CommuniTree is supported by a dynamic partnership of community, industry and government agencies with the ultimate goal of creating a healthier and more diverse tree population. A tree plantation was organized by CommuniTree in name "The North Chennai's First Man Made microFOREST". Close to 150 volunteers, including residents, students and employees of various colleges came together at Moolakkothalam Play Ground, Opposite to Washermanpet Metro.Chennai on 21.12.2019 to plant 10,000 saplings and enhance the City's green cover via an urban forest! Shri Thiru Jayakumar, Honourable Minister for Fisheries Department, TN, was the chief guest at the green drive. The saplings were planted on 14 acres across. Such plantation drives not only help reduce carbon footprint, but also bolster local biodiversity.



**COMMUNITREE PROGRAM "THE NORTH CHENNAI'S FIRST MAN MADE
MICROFOREST" (MIYAVAKKI Forest)**

Medicinal Plant Expo 2020

As an extension to the Pongal Day celebrations 2020, an expo (Exhibition) on medicinal plants was organized. (10th January 2020). An array of medicinal plants was displayed for both staff and students of Our Institution. Healing with medicinal plants are as old as mankind itself. The connection between man and his search for drugs in nature dates from the far past. Awareness of medicinal plants is essential for usage against illnesses due to which man learned to pursue drugs in barks, seeds, fruit bodies, and other parts of the plants



MEDICINAL PLANT EXPO

Environmental Awareness Quiz -1

The Enviro Club conducted an Environmental Awareness Quiz from 18.07.2020 to 24.07.2020, in National level.

Environmental Quiz is the National Level Online Quiz to create Environmental Awareness among the staff and students of various colleges. From 18.07.2020 to 24.07.2020 the Enviro Club conducted a quiz on "Environment" Nearly 626 participants of students and staff attended in the quiz. The quiz highlighted about the environment of our mother earth. The quiz was very informative and it reaches to the students and staff.



Orientation for the Fresher's on 22.09.2020

The Guru Nanak College to commemorate the 550th birth anniversary of Shri Guru Nanak Dev Ji celebrated a Go Green Initiative by Enviro Club conducted online Orientation for the Fresher's on 22.09.2020. Our College has a long standing tradition of preserving culture, heritage and flora and fauna in the campus. Dr. M. Gopi, Assistant Professor and Head, Department of Plant Biology & Plant Biotechnology shift – I and Staff Co-Ordinator for Enviro Club presented a detailed presentation and highlighted on the major activities organized during the previous years along with Dr. S.S. Jayaraj, Assistant Professor, Department of Advance Zoology and Biotechnology Enviro Club Co-Ordinator from shift –I and Dr. P. Kavitha, Associate Professor and Head, Department of Corporate Secretaryship, Enviro Club Co-Ordinator from Shift - II.



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The Management, Principal and Members of Staff Cordially Invite the Freshers of 2020 -2021 Batch to Join the online Orientation of
Enviro Club

Organised under the Auspices of Students' Affairs
Tuesday, 22 September 2020 / 3 .00 p.m

Dr. M. G. Raghunathan
Principal

Mr. Manjit Singh Nagar
General Secretary & Correspondent

ORIENTATION FOR THE FRESHER'S

Tree Plantation on Guru Nanak College Campus

Department of Plant Biology and Plant Biotechnology has organized Tree Plantation on 19th January, 2021 in our Guru Nanak College's Campus under the guidance and supervision of General Secretary and Correspondent Mr. Manjit Singh Nair Sir, stated that, this practice will create a habit of planting more trees in near future. A total of about 287 saplings were planted on the college campus and were furthered watered by the students.



TREE PLANTATION

Arbores of GNC an Eye opener to Epithets of Trees

The objective of this “Arbores of GNC an Eye opener to Epithets of Trees” is to explore the plant species of GNC campus. On 19.03.2021 Friday, Arbores of GNC an Eye opener to epithets or trees were inaugurated by Dr. M. G. Rangunathan, Principal, Guru Nanak College. He also tagged few points in the college campus and appreciated the initiatives of Plant biology and Plant Biotechnology Department. He also highlighted that, Plant labels play a vital role, in College campus, so that students and lay person can be familiar with all the plants in the campus.



Fuchsia Plant Expo 2K21

The objective of this “Fuchsia Plant Expo 2K21” is to create Entrepreneurs skill among students of PBPBT department. The PBPBT conducts various activities, one among them are students were trained to starting their own nursery gardens and were trained to enter the nursery business. For that there is a need to have an experience and a strong knowledge of plants and plant culture, purchasing an existing business or starting a new one are logical options. So it was planned to inaugurate Fuchsia Plant Expo 2K21 in College campus each year. This academic year, the expo was organized on 19.03.2021. Dr. M. G. Rangunathan, Principal inaugurated the Fuchsia plant Expo for the year 2K21 and encouraged the students to extend the activity each semester.



FUSCHIA PLANT EXPO 2K21

Connect with the Ocean-Coastal and Marine Debris Clean Up awareness program

An awareness programme was arranged by TREE Foundation, where 36 Enviro Clubstudents and 3 staff members of Guru Nanak College were invited to join the Coastal and Marine Debris Clean Up awareness program titled as “Connect with The Ocean”. The program was conducted at VGP Marine Kingdom Chennai on September 18th 2021 scheduled between 09:35 A.M -05.30 P.M.36 Enviroclub students participated in an awareness program organized by Tree Foundation on 18.09.2021 between 09:35 A.M -05.30 P.M. A float theme of Ocean was arranged; this theme depicted the different types of pollution that directly or indirectly affecting the Ocean Animals. A detail Float design were arranged to explain regarding ‘Threats to the Marine Environment’.



Cycle Rally in support to Wildlife Conservation

An awareness programme was arranged by Tamil Nadu Forest Department, where 12 Enviro Club students of Guru Nanak College were invited to join the Cycle Rally program titled as Wild Life Celebration 2021 with theme “A Conservation Collective Wild Run, 2021!”. The program was conducted at Besant Nagar beach on October 03rd 2021 scheduled between 06.00 A.M. -12.00 P.M. The programme aimed at creating awareness among the youth to have a passionate heart for the biodiversity around them.

A cycle rally was arranged by Tamil Nadu forest department on October 03rd 2021 in Besant Nagar beach to create awareness among people on the need to conserve and protect wild animals in connection with Wildlife Week celebrations. The programme aimed at creating awareness among the youth to have a passionate heart for the biodiversity around them.



Green Audit and Mapping the Trees

Our Guru Nanak College is known for its lush foliage and shady trees, some almost as old as the college itself. "The trees are part of the heritage of the college.

Aim:

This work aimed at the complete study and analysis of the flora of the Guru Nanak College Campus, Velachery.

Methods:

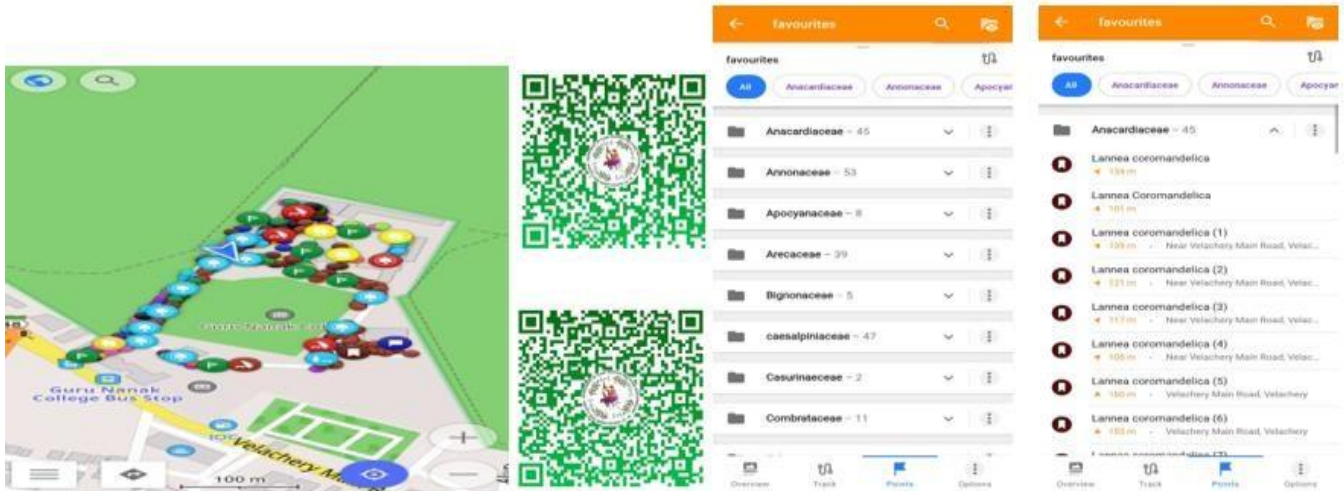
- To study and understand the changes in the flora through Flora audit
- The collected data of all the plant species are geotagged with latitude and longitude using an app called as OSM tool.
- This data is further processed to get a proper map containing the keys to all the plant species based on their family in an online application known as my maps.
- This data is further interpreted along with the complete details of each species in a website along with the individual and the overall map.
- The URL of each and particular plant species is further generated in the form of a QR code and affixed to the possible plant species.
- This provides better feasibility and accessibility to a larger crowd to get access about the knowledge of plants.
- In the scientific point of view, this work helps to study the ecology, biodiversity and various other concepts.

Link to My Map: <https://sites.google.com/gurunanakcollege.edu.in/e-flora-gnc-pbpbt/home>

Geo Tags of Guru Nanak College Flora:
<https://play.google.com/store/apps/details?id=net.osmand>

E- Flora Video Link: https://drive.google.com/file/d/1wXRKHwnj9KXi_fjtg-vBxxZNQyapUoV/view?usp=sharing

2020-2021



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Vermicomposting Unit Maintenance

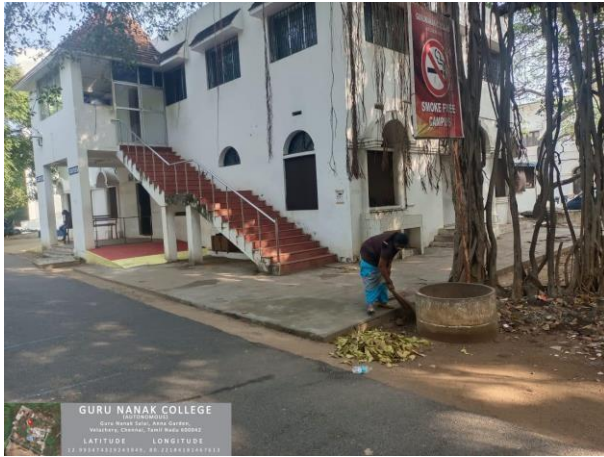
To produce Organic compost using leaf litter of GNC campus

Department of Plant biology and Plant biotechnology and Enviro club are maintaining the Vermicompost unit, laid out by the Guru Nanak College Management from 14.12.2021 to till date. The Collected litter from the GNC Campus are dumped into the Vermicompost unit and watered periodically. Aeration were check once a week by digging the unit completely. Once the compost is ready, it will be used to fertilize the flora of GNC. Thus, the compost helps in improving the soil fertility and make the plant grow better.



VERMICOMPOSTING UNIT MAINTENANCE





Dust Bin for collecting domestic solid wastes from the GNC Campus

Waste Water Recycling RO plants installed in GNC



Rain water harvesting Catch Points - 34



The students are involved in environmental protection to ensure their responsiveness towards conservation of nature



Coastal Cleaning up Program – Marina Beach, Velachery lake cleaning, Cleaning of schools and temples in villages are done by students as Swachh Bharath initiatives.



Solar Energy Panels



Solar Energy Panels



Bio Gas Plant



Jute Products Awareness Program

A Student Out-reach programme on the creating awareness about Jute Products was organized at the College premises in G.S. Gill Hall on 10.02.2023. at 11.30 AM. The aim of organizing this awareness programme is to create awareness and promote various jute products available as an alternative to plastics. The Programme was attended by 179 participants (4 Faculty + 175 Students).



Sparrow Cage Awareness Programme

A Sparrow cage awareness programme for creating awareness about inviting of sparrow was organized at the College premises in Assembly square on 11.02.2023. at 10.30 AM. House sparrows (*Passer domesticus*) are very important to the ecology and play a major role in maintaining the ecological balance. The sparrows play an important role as insect controllers as they eat a phenomenal numbers of insects. Because of the increased anthropological activities and its habitat destruction, its population is reduced and might go extinct, if we aren't start to conserve it. So, we setted up the sparrow cages in our campus to increase the sparrow's population and makes its ecological importance valued.



Fuchsia 2K23 Aarogya Mela

Considering this, Plant Biology and Plant Biotechnology Programme, Organized the Fucshia 2K23 Aarokya mela on 27.02.2023 and insisted on the importance of a conventional lifestyle. First-year students explained the therapeutic uses of every plant. Third-year students displayed 14 traditional foods were displayed in the Aarokya mela. It was an attempt to raise awareness among students about the benefits of millet, organic food, and avoiding junk food.

Notably, 2023 has been declared the International Year of Millets (IYOM 2023) by The United Nations. So to celebrate the initiative, the event also had a food court and stalls, boasting organic and millet-based dishes. Second-year students displayed ten varieties of millets, ten varieties of Cereals, and 34 types of spices and herbal products.

