Annual Report

National Service Scheme,
Indian Institute of Technology, Bombay
2016-17
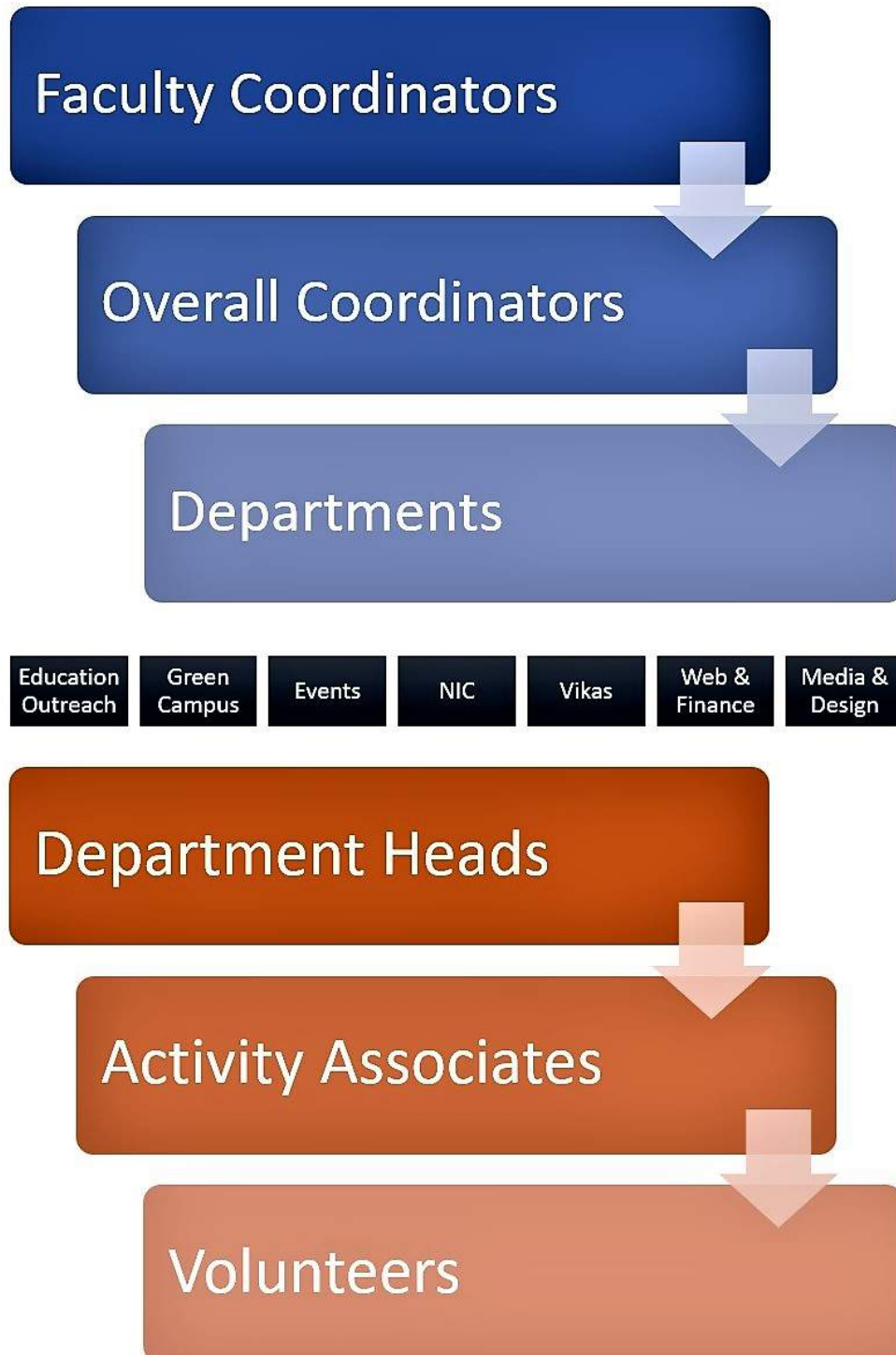
Contents

Introduction

National Service Scheme, IIT Bombay is the most active and perseverant organization in the campus in the field of social/community service. It was established to involve students in community service and let their personality develop through it. Through various activities NSS IITB reached new heights in the academic year 2016-17, with 340 freshmen volunteers enrolling in NSS, and more than 100 non-freshmen volunteers participating in the activities. The reach of the activities also expanded enormously creating the impact.

Though NSS IIT Bombay is a part of curriculum of first year students as directed by the Ministry of Youth Affairs Sports, Government of India, its impact can be felt in all parts of the nation and beyond. This year, for the first time, we were able to spread smiles among the Syrian, Iraqi and Yazidi kids in UN refugee camps through collaboration with Letters of Love. We started working on the innovations of grassroot level innovators and presented our work at Rashtrapati Bhavan during festival of innovation. We have reached the students of remote places of India including naxal affected areas, who use our educational videos for studying in regional languages. We also reached to the school children across the states of india through The Artistic impact- a pan India competition thereby introducing these young minds to NSS as a platform for social service. We connected to people of all age groups for creating a community to promote gardening and nature lovers interests.

We increased our reach inside Mumbai as well by reaching to NGOs and schools by demonstrating various sustainable ways of living. Collected cloth, on donation to the underprivileged people on the outskirts of the city, helped us spread the smiles. Thus, composed of five departments working towards creating better life, Educational Outreach, Events, Green Campus, National Innovational Club and Vikas, the activities of NSS IIT Bombay are varied and cover almost all aspects of social service. Educating underprivileged students irrespective of language and distance barriers, maintaining the biodiversity of the campus and reestablishing the bond between young generation and nature, working towards environmental sustainability, improving the life of campus residents, reaching out to the construction workers in the campus and identifying their problems and working on them, giving support to the grassroot innovators to enable them to compete with the modern technologies and bring light upon their innovations are some of the major activities undertaken by NSS IITB.

Spreading happiness through community service has been one of the primary objectives of NSS. With innovative activities across the departments catering to all classes of the campus residents, we try to create small, happy and memorable moments in their lives. And working in NSS itself has been one of the prime sources of happiness for the people associated with us. Bringing to light the stories of the different campus residents who are responsible for its smooth functioning and also the stories of our volunteers has also been a major and a very popular activity undertaken by NSS, IITB.

Structure of NSS IITB

Faculty Coordinators

Overall Coordinators

Departments

| Education Outreach | Green Campus | Events | NIC | Vikas | Web & Finance | Media & Design |

Department Heads

Activity Associates

Volunteers

Educational Outreach

About the Department:

Educational Outreach is the department of NSS, IITB that strives to ensure that every child receives the formal education she or he is entitled to. We at Educational Outreach believe that lack of education is one of the biggest root cause of all existing problems in the society. Also, acknowledging the fact that formal education is not enough for the all-round development of a child, initiatives like Muskaan and Prayog were started to train the students in extra-curricular activities and to develop their scientific temperament respectively. Also, this department has national outreach due to its YouTube channel, Open Learning Initiative. Voice for Purpose is another initiative wherein books are recorded for the blind students. With new initiatives like Educational Games, this department is constantly trying to make learning more fun, interesting and enriching. From the mess workers of the institute to the children of remote parts of India, the beneficiaries of this department are varied and large in number.

Initiatives:

Open Learning Initiative:

About the department: OLI is a YouTube channel that was launched by NSS, IITB to ensure that language does not become a barrier in education. With educational videos recorded by our volunteers (mostly UG students in their first, second or third years) in regional languages, we aim to make the internet equally useful for students who don't study in English medium schools. Currently, the channel contains 170+ educational videos on Science and Mathematics in eight Indian languages, namely, Hindi, Marathi, Gujarati, Bengali, Odia, Malayalam, Tamil, and Telugu. There is also a course on English to benefit the students and a section on scientific experiments, wherein interesting and informative experiments are demonstrated to enhance the interest of the students in science and to promote scientific temperament.

Link: `http://youtube.com/c/OLINSSIITB`

Ideation: The idea of launching this YouTube channel was born out of a discussion with a nearby NGO, Vidya. They were on the lookout for educational videos in Hindi and Marathi. They had AV facilities and hence they could have shown those videos to students in the absence of teachers. However, thorough search on the internet did not produce satisfactory results and most of the good videos were in English. That's when we thought of starting our own YouTube channel.
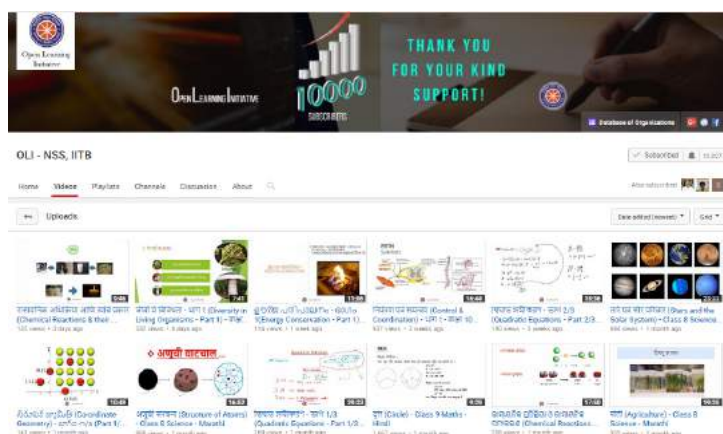
Homepage of the OLI channel on YouTube

Outreach: The growth of OLI has been exponential in the last year. Starting from 300 subscribers, OLI has grown to about 12.5k subscribers and 1,100,000+ views. Many NGOs in Powai like Vidya, Asha, Logic Center and Community Welfare Association (LCCWA) etc. are using our videos for teaching their students. LCCWA has regular OLI sessions for students on Tuesdays and Thursdays. Many people from other parts of the nation have also been availing our resources. This is what Diwakaran sir from LCCWA had to say about OLI:

"OLI is a fantastic tool for learning Math specially for 8th std students. As it is in Hindi language and is for the vernacular medium, it is very easy for them to understand the concepts"
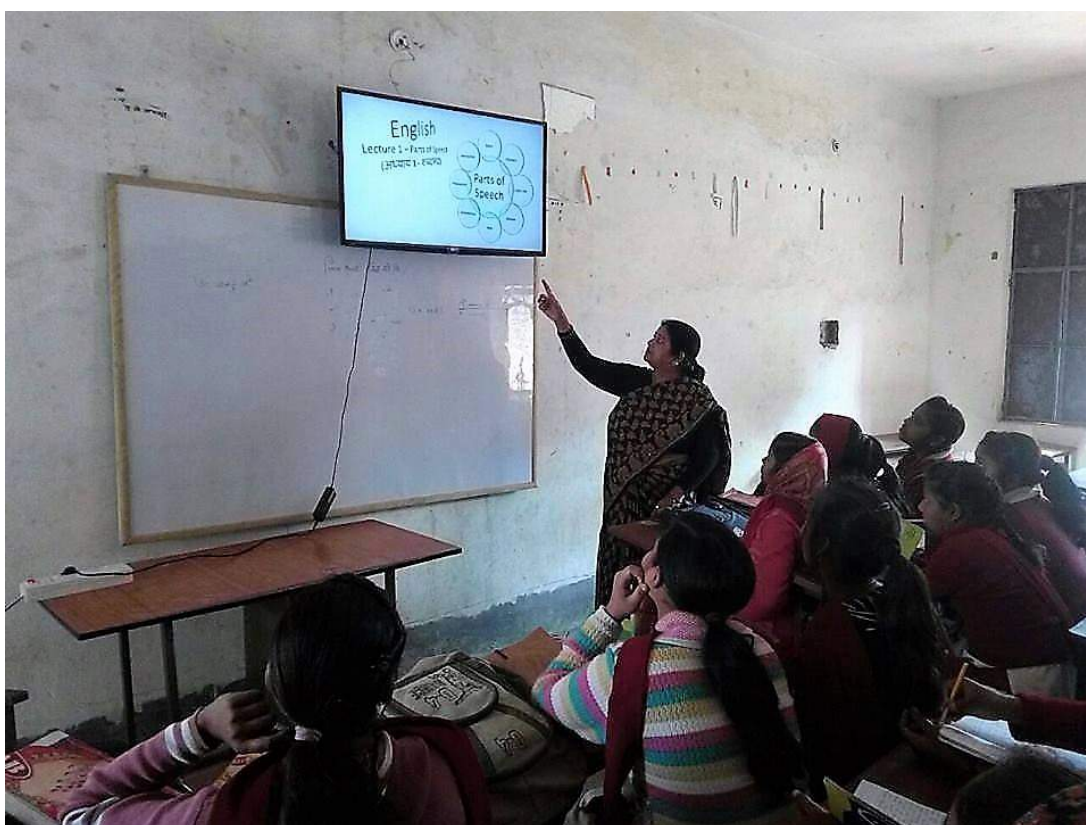
Disha – an E-learning program in Giridih, Jharkhand using OLI videos

Long-term goals:

- Cover all the major regional languages of India

- Reach out to as many NGOs as possible.

- Cover all the basic topics in Science and Math and also other subjects

- Train the students in English and make them proficient in the language so that they don't face any problems in their higher studies and professional life

- Make learning fun and interesting

Students of LCCWA NGO attending OLI sessions

Teaching:

About: Teaching can be considered as the foundation stone of Educational Outreach. Our volunteers visit various NGOs in and around the campus to teach the students enrolled there.

NSS volunteer teaching at an NGO

Outreach: The NGOs currently involved with us are Right to Education - Dhyantara Center (RTE - DC), Vidya (having 5centers), Asha, Logic Center and Community Welfare Association (LCCWA) and Computer Literacy Program (CLP) with 12 centers in all. A total of more than 100 volunteers taught more than 300 students in these centers. A continuous assessment program was introduced for the first time in NGOs by the implementation of log books to keep a record of every student's academic growth. The teaching program was carried out in summer vacations also with the aid of nonfreshmen volunteers. 3 NGOs were functional with 50+ volunteers teaching a variety of subjects.

The way forward: We plan to extend our volunteering to more NGOs in near future (distance of the NGO from the campus is a major constraint in this direction).

NGO children reading after they were taught

Muskaan:

About: Muskaan is a socio cultural initiative started in 2014 with the aim of training the students in extra-curricular activities. This year, the regular sessions for dance, dramatics and fine arts continued as before (once per week) and new domains of creativity were explored. There were origami sessions, cartoon-making sessions, typography sessions, thumb-painting sessions etc. for the students. More than 20 non-freshmen volunteers participated in this initiative over the course of two semesters.

Outreach: Over 150 students from 3 NGOs benefited from Muskaan

Glimpses of Muskaan Sessions

The Way Forward: It has been planned to introduce Music as a cultural activity in Muskaan. Introduction of sports is also under consideration. Regular sessions will continue as before and we plan to expand to as many NGOs as possible.

Dance session under Muskaan

Prayog:

About: *"It vexes me when they would constrain science by the authority of the Scriptures, and yet do not consider themselves bound to answer reason and experiment."*
– Galileo Galilei.

Prayog was started with a belief that science is better understood by demonstration. Our aim is to instill scientific temperament among the students by the means of simple, yet interesting and informative scientific experiments. The students get a chance to perform the experiments themselves after the demonstration. Also, care is taken to ensure that the experiments are performed with readily available apparatus so that the students can easily replicate them when they go home. All the experiments are followed by an explanation of the scientific principles on which the experiment is based. We also conduct quizzes based on the scientific principles demonstrated in previous sessions. This year the students were also taken to various technical exhibitions inside the IIT campus to ignite their curiosity and inspire them towards science.

Outreach: Over **150 students** from 3 NGOs benefited from Prayog

Refraction demonstrated by LASER

Experiment demonstrating the transfer of flame through the wick gas

Experiment demonstrating surface tension

The way ahead: We are trying to expand the experiment section on OLI channel by recording more

Prayog experiments. Also, efforts are being made to introduce easily doable projects in Prayog. Experiment reports will also be incorporated shortly. Regular sessions will continue as before.

Voice for Purpose:

About: Voice for Purpose is an initiative aimed at providing quality audiobooks for the visually impaired community. Recently, a YouTube channel has been created to increase the accessibility of these audiobooks and facilitate their distribution. We are currently focusing on providing Indian literature (**Gaban, Tenali Raman, Nirmala** and **Akbar Birbal** are some of the works that have been covered till now) but are not limited by it (**Alice in wonderland, A tale of two cities** and **Aesop's fables** are some of the foreign books that are available on the channel).

The way ahead: The channel currently hosts 30+ audio recordings, has about 50 subscribers and 250+ views. We plan on reaching out to blind foundations and schools and provide requested content. Also, we will be starting a monthly newsletter which will include news on current affairs and global happenings.
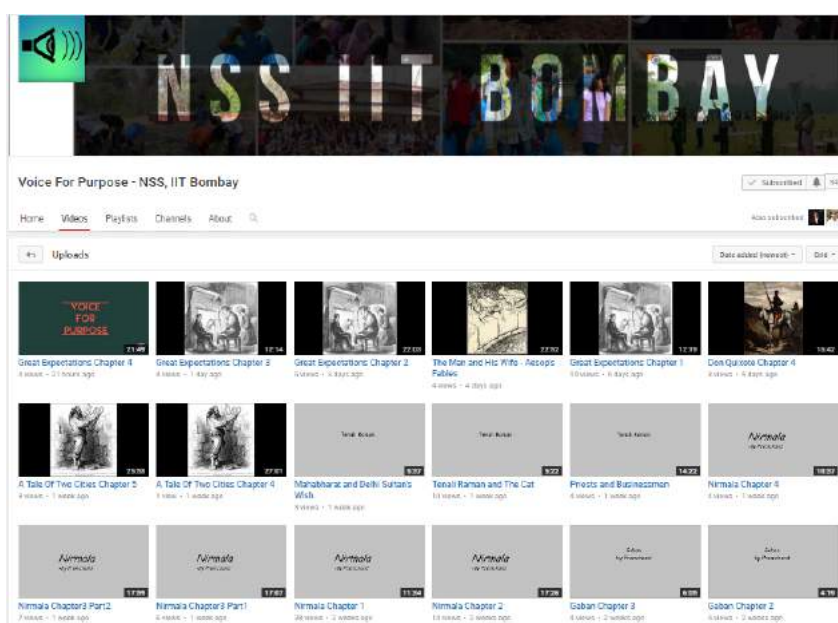
Homepage of the YouTube cannel for Voice For Purpose

Adult Literacy Program:

About: *"Anyone who stops learning is old, whether at twenty or eighty. Anyone who keeps learning stays young."*
Henry Ford

This program was started on the request on security guards to teach them the basics of English. After that, we felt that we have many people who make our lives better and we could extend our helping hand to them. Mess workers in most of the mess are young people and have lacked proper education due to various reasons. They are busy during the daytime and have really very less time to put the efforts to learn. Still, we organised the night classes for them and we appreciate the effort they put in to learn new things. Apart from mess workers many residents and workers in the campus who attend classes at CLP center were enthusiastic about learning new things.

The aim of teaching them enough English is to equip them with the capability of understanding basic day to day words and ease their struggle when they roam out in the institute. We have come a long way since the program was limited to security guards and ALP (Adult Literacy Program) has been extended to mess workers and students in the Computer Literacy Program. Currently, mess workers in Hostels – 2, 3, 5, 6, 7, 8, 9, 15 and 16 are benefiting from this program. This year, we distributed dictionaries to the mess workers to facilitate their learning process. We have been receiving a very positive response for the program and the mess workers have shown commendable enthusiasm towards learning.

Hostel 7 mess workers learning English during night class

Night class for hostel 10 workers

Outreach: Currently, **50+ mess workers** from **9 hostels** are a part of this program. Also, **20+ students** at the Computer Literacy Program center are also beneficiaries of ALP.

The way ahead: We plan on extending ALP to PHO workers and possibly, construction workers.

Mini library at Aman Day care center:

In spring semester of 2015-16, Kibo and NSS IITB came together and launched the MilesForMoney campaign, wherein, on receiving 500 pledges, ImpactRun would sponsor a mini-library for the students at the Aman Day Care Center, which was set up by the institute for taking care of the children of the construction workers of the campus. We received a very good response, and could easily establish the mini-library at Aman Day care center. That library is now filled with the books relevant to the kids there.

Mini library at Aman Day care center

Vikas

About the Department:

Vikas department stands for sustainable development. Throughout the year, we carry out activities that promote awareness about sustainability and encourage people to adopt a sustainable lifestyle. This department has brought about some significant changes in the campus, the primary one being convincing all the hostels to celebrate Eco-friendly Ganesh Chaturthi. This year, with the launch of the sustainability club, we have started to spread outside the campus, sharing sustainability ideas and getting more and more people to adopt sustainable practices. Here are some of our major activities

Major Activities

Eco-friendly Ganesha Idols:

Like last year, we ensured that every hostel celebrates Ganesh Chaturthi using clay idols instead of POP idols. However, this time we even went one step ahead and participated in the clay idol making workshop organized by the staff club. The idols made by our freshmen were distributed to the construction workers residing in the Hill Side area of the campus, in order to enable them to celebrate the festival in an eco-friendly manner. The efforts were appreciated by the construction workers, with some of them recollecting the old days, when they used to make the idols themselves from clay, for the festival, before the modern expensive POP idols stormed the market. Our efforts were directed towards reducing the pollution in the Powai Lake of the campus. We would like to mention that we are grateful to Saraswati Ma'am and the members of the staff club for organizing this workshop. Here are a few glimpses of the freshmen in our workshop.

Eco friendly Ganesha idol being made by volunteers

Animal Vaccination Drive:

On 15th October 2016, the Animal Rescue Group of IIT Bombay, consisting of professors, students and campus residents, led by Prof. Madhu Belur and Prof. Prita Pant, organized the annual animal vaccination drive in the institute. The vaccinations were carried out by members of The Welfare of Stray Dogs organization. NSS volunteers helped in the vaccination process and also maintained the database of the vaccinated dogs. More than 50 dogs were vaccinated. We were delighted to see that many people came forward to help when the vaccinations were being conducted in their hostels, or near their residential areas. Here are a few glimpses of the drive:

Animal Vaccination Drive

Sustainability Club, Tarang:

The first step towards solving any environmental problem is spreading awareness among the masses. With this idea in mind, NSS IIT Bombay introduced 'Tarang : A Sustainability Club'. Among the various aspects of Tarang, the most important is interactive sessions with children, because these sessions help promote sustainability at the grassroot level. Discussions on clean energy were conducted in NGOs Asha and Vidya. The children were shown presentations, explaining the existing threats to our ecosystem, and how the use of renewable energy can help develop a sustainable habitat in the long run. Household models based on the usage of different forms of clean energy were demonstrated and explained, which encouraged the children to apply sustainable tactics in their homes. The enthusiasm of the children proved it was a good start for Tarang in its journey to promote and help develop a sustainable future for all of us. The other aspects of sustainability club included blog-writing on topics relevant to sustainability and content generation (videos, photos that highlight certain aspects of sustainability). Examples of such videos can be found on our facebook page. One such video, made for Swachch Bharat Abhiyaan was shared by the SBA page.

Volunteers demonstrating sustainable ways of living to students

Volunteer giving presentation to the kids

Cashless Transactions Awareness Drive in Phulenagar:

Under the Vittiya Saksharta Abhiyan (VISAKA) Campaign of the Ministry of Human Resources Development, NSS unit of IITB was supposed to adopt a market place and encourage the vendors and consumers there to adopt cashless transaction methods. Vikas extended our 'Cashless Transactions Awareness Drive' to Phulenagar slums in the vicinity of the campus and also covered the remaining areas of the Powai Market, thus going beyond the targets for an NSS unit under the VISAKA campaign of the MHRD, Government of India. The volunteers explained the various cashless transaction methods to both shopkeepers and consumers and gave live demos of services like UPI, USSD etc. wherever required. Also, feedback was taken from the people already using these services. After the drive in Phulenagar, the reach of our awareness campaign has almost doubled.

Interaction with consumers

Interaction with vendors

Flex to paper bag conversion:

Our volunteers converted flexes leftover after the institute events into carry bags. These were given to consumers in the market area and their feedback was taken. The bags received a lot of appreciation from the consumers because of their reusability, weight-carrying capacity and toughness. The bags are ideal for carrying everyday groceries and supplies. We plan to continue this activity next year as well and find ways to provide more alternatives to plastic to the institute community.

Volunteers making bag out of the flex

Taking feedback from consumers after giving bags to them

Green Campus

About the Department:

Green campus is the department of NSS IIT Bombay which takes the people involved a bit closer to the nature and works in direction of establishing their relationship with nature. While doing this, we try to serve the mother nature by trying to build the sustainable ecosystem inside the institute. We do plantation, collection of naturally grown saplings, biodiversity mapping, transplantation of saplings etc.

Major Activities

Prakriti:

Prakriti is a discussion and knowledge sharing forum aimed to create awareness about nature and make an attempt to involve more people in gardening. The forum is intended to make the people's entry to the world of gardening easier and assist them in all the problems they face while doing so. Apart from queries and discussion, people can share any interesting information regarding nature through Prakriti. This is aimed to make people more enthusiastic about the nature.
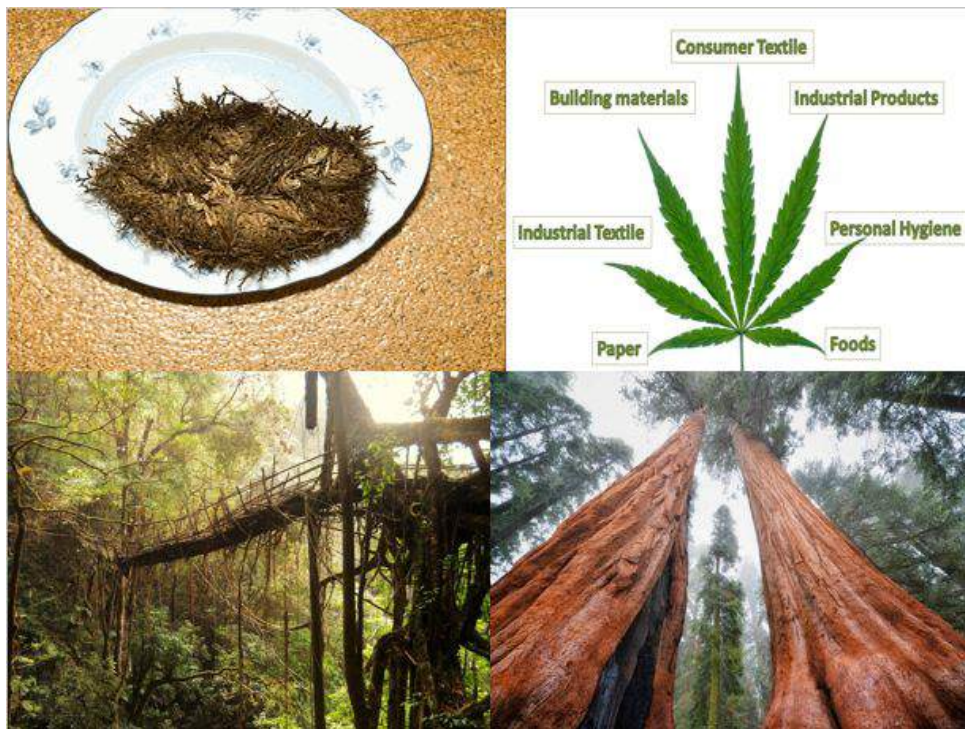
Preview of some of the Prakriti posts (Resurrection of plants, Hemp, Living root bridges, tallest tree-Redwood)

- **Ideation**
  There are many residents of the campus who are enthusiastic about gardening and want to try out different techniques and explore the field. But very few know where to start! The need was felt for guidance and a platform for all the people who are enthusiastic about exploring gardening. This need gave rise to the idea of Prakriti-A forum for discussion and knowledge sharing.

> **Link:** `prakriti_nssiitb@googlegroups.com`
> **Link:** `https://groups.google.com/group/prakriti_nssiitb`
> **Link:** `https://nssiitbblog.wordpress.com/category/green-campus/prakriti/`

Prakriti was started as a google group in August 2016. After starting of blog of NSS, the informative posts among the posts on Prakriti were shared on blog as well as google group. Some of the notable informative posts in Prakiti involved Largest trees- Redwoods, Resurrection of plants-a story of how plants survive the harsh summer, Hemp: A sustainable leap or Narcotic, Medicinal plants in NSS Nursery and communication among honey bees.

Some of the people also came up with their queries which were discussed and solved in the group. It involved the queries regarding cutting of the harmful trees, initiation of nursery in hostel 13.We hope to reach out to people with more knowledge of gardening and botany so that they can help solve the queries of group members whenever required.
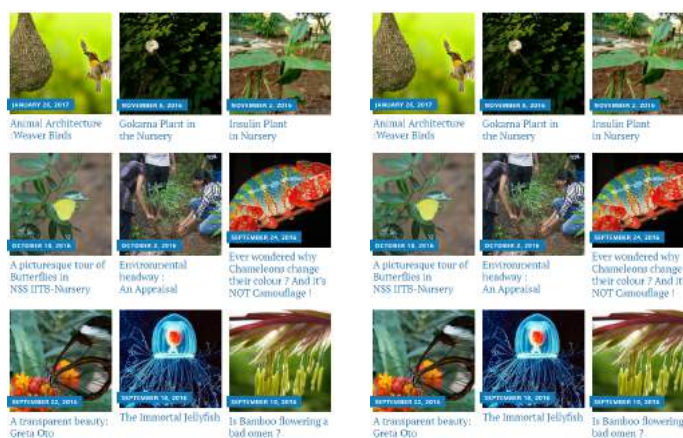
Preview of Prakriti category on NSS IIT Bombay blog

Vanmahotsav:

Hostel 15 and 16 are relatively new hostel and its construction has caused demolition of the flora in that area. We started working on it during Vanmahotsav week 2016. Vanmahotsav week (July 2016 first week) was celebrated by doing plantation of Jungli Badam saplings (Sterculia foetida) in Hostel 15 premises.

These saplings were collected by the volunteers in previous monsoon from the shady areas where they might have died due to lack of sunlight. They were planted in plastic covers for them to be old enough to sustain without much care. After nearly 10 months of life in the plastic covers, they were transplanted behind hostel 15, C wing with the help of summer volunteers to green the area. 13 such saplings were planted and all are healthy till date. We hope they will grow to tall trees in couple of years to add to the beauty of the hostel. In future, we aim to plant trees which will attract butterflies and birds near

hostel 15/16 area. Some of the trees which we plan to plant are Vilayati Chinch (Pithecellobium dulce) for attracting butterflies and Sand Paper tree (Streblus asper) for birds.

Plantation of Jungli Badam sapling during Vanmahotsav with help of summer volunteers

Butterfly Garden:

Butterfly garden is a concept of growing flora which will make the garden friendly to the butterfly species. We have been growing the butterfly attracting species in NSS Nursery and spreading them to other parts of the institute through transplantation to make the institute and NSS Nursery an abode for butterflies.

- **Ideation**

  While searching for the past efforts of biodiversity mapping in IIT Bombay, we came to know that IIT Bombay campus had around 80 species of butterflies in 2008-09 report made by WWF. So we looked for the opportunities if we can work to sustain the abode of the butterflies so that we can have a sustainable ecosystem of butterflies inside the campus. The butterfly garden idea was developed through talks with Mr. Rajendra Ovalekar, who has developed a beautiful butterfly garden in his farm in Thane. We also came to know about the past efforts by Mr. Paresh Kale, an alumni of IIT Bombay, to develop a butterfly garden which got demolished in later years. So, by taking guidance from these people, we started working on developing a butterfly garden inside NSS Nursery.

Life cycle of Common Grass Yellow butterfly recorded in NSS nursery. Clockwise order: Eggs on Vilayati Chinch sapling, Caterpillar, Early stage of Pupa stage, Butterfly about to emerge out of the Pupa

- **Work**

  We planted saplings of trees and shrubs of two types: Nectar plants and Host plants. Host plants are those which are not good for aesthetic purpose generally but have the leaves which are liked by the caterpillars of the butterflies. So, adult female butterflies choose such host plants for laying eggs on them. Each butterfly species has certain set of host plants which are needed for the growth of that species. Nectar plants are the plants which bear flowers and are food for the adults. Again, each species of butterfly has its choice of the flower and feeds only on specific flowers. So, we started our task by making the database of the butterfly species and their preferred host and nectar plants. We then started their plantation.

Host plants in NSS Nursery: Vilayati Chinch, Bryophyllum, Kadhi Patta (Curry Leaves), Sada Fuli, Rui, Tamarind, Gunj
Nectar Plants in NSS Nursery: Lantenna, Gaillardia, Chrysanthemum, Gokarna, Touch me Not
Butterflies identified with full life cycle inside NSS Nursery: Common Grass Yellow butterfly (Eurema hecabe), Red Pierrot butterfly (Talicada nyseus)

Common Grass yellow Butterfly

In future, we hope to increase the count of host plants and nectar plants. The task of identifying the different species of butterflies is tough and slow. We are working on identifying the species which visit the nursery (other than those mentioned above) so that we can ensure that they get their specific food in the nursery.

Sapling collection:

During monsoon, many saplings grow naturally beneath the trees. These saplings are not going to sustain after the monsoon as they are either in crowdy or shady area. So, we collected such saplings from roadside and lakeside. These were then planted into plastic covers and taken care of. This time we collected Jamun, Mango, Jungli Badam, Taad, Umber saplings. We collected around 250 saplings and we are happy that most of them are alive. These saplings will be planted to the hostel areas when they are self sustainable.

Collecting Ber sapling from area near H6 and plantation of collected saplings into covers

Hostel plantation and Workshop:

To involve more more people in plantation activities and plant the tree saplings at the places which lack shade, we planned to reach out to hostels. Some of the hostels had approached us for help in development of their gardens. We extended this activity to other hostels which are enthuciastic about the workshop.

Plantation and workshops were organised in hostel 4, 5, 9 and 14. We planted medicinal, flowering plants and trees in hostel 4 and 9. We also planted the trees in areas which required shade. Hostel inmates were involved in the workshop where they used the waste plastic bottles they had as the hanging pots and planted aesthetic plants in them to decorate the balconies in front of their rooms.

Compost making from mess waste (Banana peelings)

A resident of Hostel 9 participating in workshop

We started vegetable garden in hostel 14 with the help of hostel inmates and hostel council. We also initiated the task of recycling the hostel mess waste into compost manure. This task is taken up to make the piece of land fertile and develop the vegetable garden in long term. On request of hostel 14 council, we did the biodiversity mapping and stuck the placards bearing names of the trees to them.

Natural Fence:

To protect the plants from nuisance of cattle which are frequent inside the campus, we planted the saplings of decorative plants along the boundary of the nursery to make a fence for short term. We also planted the Jungli Badam trees at regular distances along the boundary as a long term natural solution to the problem. These are the plants which are not eaten by cattles and grow fast.

Fence made by Jungli badam for long term

Reusing waste:

- Compost making

  - We used died weeds after deweeding of the nursery for the composting purpose. This took us one step closer to making NSS Nursery self sustained.

  - We used the dry leaves collected by PHO (Public Health Office) workers from institute roads and hostel mess vegetable waste for making the compost manure.

  - This served as the natural organic fertilizer for the plants and at the same time reducing the use of resources and facilitating the reuse of waste

  - We have been using this method of composting to convert the infertile soil (around construction sites) into fertile one so that the land which is barren now can be made green in future. The process is slow but is one of the cheap long term solution.

Compost making from mess waste (Banana peelings)

- Flex and Jute rope for shade

  - We need the shade for protecting the gardening tools from sun and rain. As we do not have a permanent solution for this at current stage, we reused the waste banners used for various events' publicity and the waste jute ropes for making a shade for the gardening tools.

  - This reduced the use of resources and caused inclusion of the flex which otherwise could have entered some dumping site for the waste.

- Waste cold drink bottles

  - Volunteers collected used cold drink bottles from their friends and we used it for plantation purpose.

  - Bottles were used as the pots for planting the decorative plants. They were converted to hanging pots and nursery fence was decorated by using them.

  - This idea was also demonstrated by volunteers to the non NSS students during hostel workshops

Reusing plastic bottles to make hanging pots for plantation

Biodiversity Mapping of trees:

Biodiversity mapping is the idea of locating the exact position of trees in given area and creating a database out of it. This is important in long term as it gives us the data trends of each species of the tree like which species are increasing or decreasing in number. This database can be created as per area. We can search for reasons of these data trends and take corrective measures if required.

Volunteers tying placard to the stem of Raintree

- **Ideation**
  Student community in the campus have a huge set of activities which they can participate in and this causes them to pay very little attention to the huge biodiversity they pass by daily. We thought there can be an easy way of making this biodiversity data available to the community where they do not need to invest extra time to acquire it and praise the importance. So in addition to mapping the trees, we chose main road inside the campus and put the placards on trees bearing their names and speciality. Thus the information of biodiversity along the road is now made available to all the passers-by.
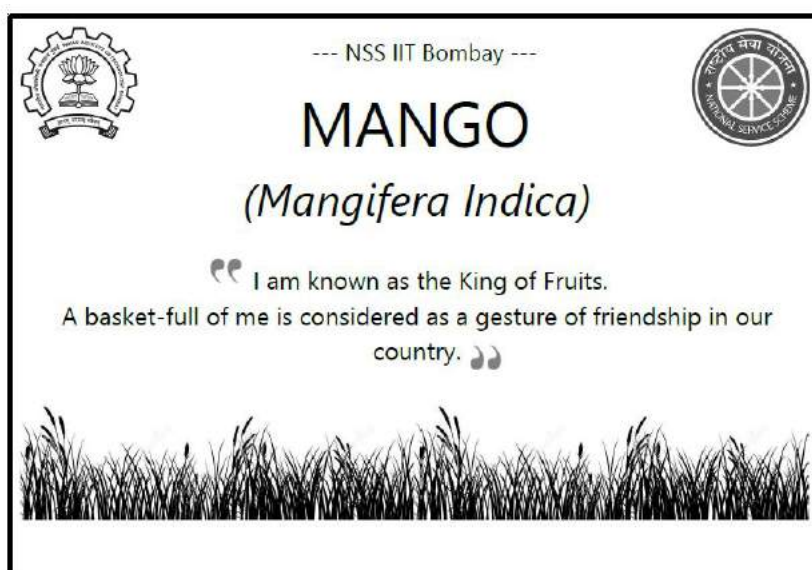
Sample placard used for biodiversity mapping

- **Work:** We started the work by taking "Study of the Biodiversity of Indian Institute of Technology Bombay Campus" by WWF as the basic data. It was the data from 2008-09. We took the names of the trees from that report and made a database of their images with the help of volunteers. Later, we started identifying the trees in the main roadside. Volunteers also tried to explain the speciality of the tree through one liner info. Eventually, we put the common name, scientific name and speciality of the tree on the placard and put these placards on the trees. Care was taken so that no tree is harmed by the activity.

Increasing biodiversity inside the Nursery:

Throughout the year, we worked on increasing the biodiversity inside the nursery. This will help in growing the different species inside the nursery and reproduce them so that they can be planted outside the nursery to increase the variety of the trees inside campus. While doing this, care is taken so that the species we are spreading is not invasive in nature. The list of plants/trees we have in nursery is given on next page.

Pomegranate	Mango	Bryophyllum
Paan / Nagaveli	Kanher	Aloe vera
Raatrani	Gunj	Shataveri
Money plant	Henna/Mehndi	Jungli Badam
Umber	Ber	Jatropha
Christmas Tree	Kardari	Kapoor Tulsi
Gallardia	Pudina	10'o clock
Tulsi	Rui	Papaya
Coleus	Tomato	Tamarind
Touch me not	Sadafuli	Lantenna
Banana	Cactus	Kadhi patta
Parijatak	Gulmohar	Jatropa
All masala	Neem	Chrysanthemum
Kapoor Tulsi	Chapha	Sagargoti
Insulin	Nishigandh	Hibiscus
Gokarna	Ajwain	Marua
Palash	Kund (Jasmine)	Vilayati Chinch

Summer Volunteering in the Nursery:

Establishment of NSS Nursery and unavailability of the first year volunteers during summer lead to the idea of involvement of non NSS people as volunteers. Main idea was to extend the reach of NSS to people who are enthusiastic about gardening or want to explore it. 97 students showed interest in the summer volunteering program and 70 among them were postgraduate or Ph.D students. These volunteers helped in watering and regular maintenance of the nursery during harsh summer days. They also helped in making the shade for gardening tools using waste flexes. Plantation on occasion of Vanmahotsav was carried out by these volunteers.

Inauguration of Nursery:

After getting the place for NSS Nursery, work was started in January, 2016 towards its development. The piece of barren land was converted to a beautiful nursery. It was officially inaugurated on 10th April 2016. Prof. M.B. Patil, Prof. V. Jothiprakash, former NSS faculty coordinator and Prof. A.B. Rao (NSS faculty coordinator) inaugurated the nursery. Plantation was done by the guests and enthusiastic campus residents attended the ceremony. An informative tour of the nursery was organised by the volunteers for all the people attending ceremony.

Events

About the Department:

Events try to make sure that our services to mankind find their destination. The department is very versatile with regard to the kind of activities contributing towards the upliftment of society are concerned. Helping the underprivileged by providing them with necessary amenities can be attributed as the cornerstone of what we do. Ranging from welfare of construction workers to spreading awareness about various social problems through blogs and street plays, NSS Events aims to serve the society in the most satisfying ways.

Major Activities:

Graduating Students' Collection Drive:

GCD, which is conducted during April-June, aimed to collect the belongings of graduating students which are of no significant use to them. The campaign covered the whole institute as a separate room was alloted in each and every hostel for the purpose. The Activity Associates monitored all the hostels with respect to GCD's scenario. We were enthused when we received quite a lot many goods to be donated such as books, clothes, mattresses etc. By June end we had collected enough goods to be donated. NSS donated the whole lot of collections to an NGO named.

Manav Jeevan. The people who came to receive the donations on behalf of Manav Jeevan were quite humble and were beaming with a feeling of gratitude. The amount of goods received under GCD was so huge that it took us an entire day to collect the donations from just half the hostels and eventually the NGO guys had to come back on one another day to carry away the stuff from the remaining half hostels. Though the process was quite tiring but the happiness which we saw on the faces of the Green Yatra's people inspired us to take more of such initiatives in near future.

Distribution of the clothes collected through GCD

Buddy Program and Health Camp:

Events conducted around 4 to 5 sessions of Buddy Programme in the year 2016-17. The freshmen volunteers were sent to the construction workers camps to visit them, bond with them, get familiarized with their problems and were asked to prepare a report based on the visits. The purpose of these visits was to get to know the problems faced by the construction workers and try to come up with the solutions. Some of the common problems faced by them were:

Volunteers interacting with the construction workers

- Absence of a work identity card

- Absence of subsidized facilities in IITB Hospital

- No acceptance for their children in Kendriya Vidyalaya, IITB

We also conducted a session where the freshmen educated them about the cashless facilities like Paytm, online banking, etc. The overall outcome of this activity was definitely impactful and we could come up with solutions for the aforementioned issues.

NGO Visit:

There is a firm belief that all the students and kids have immense potential packed in them but their fear of communication to the people makes them lag in confidence in organizing and portraying their thoughts but with the right mentoring, they can go places making them flourish in life. This time, the volunteers of NSS Events Department conducted a Debate and Elocution workshop for the students in our partner NGOs Vidya, Asha and LCCWA. On the day of the NGO visit the volunteers were taken to the NGOs outside IIT Bombay. This visit itself was very insightful and also helped the volunteers to know more about the functioning of a NGO. On the day of NGO visit, everybody was taken to a nearby NGOs outside the IIT Bombay Campus, where they interacted with the staff in the NGO and also with the students there.
The volunteers and the students were divided into teams and they gave the students guidelines on public-speaking thought the session. They interacted and helped the students in selecting their own topic for elocution and guided the students for the content of the topic which were chosen by students themselves.The students were encouraged to speak before their friends, or participate in a debate. The enthusiasm of the kids was unparalleled. It was a great learning experience for the kids and would have certainly given them more confidence and very good exposure when it comes to public speaking. These are some of the

moments of the session.

A glimpse of the NGO visit

Institute Audit of Waste material:

NSS Events conducted 3-4 sessions of Insti Audit this year. The freshmen were allotted different areas in the institute which they were supposed to scout and find out 3 ways in which we could reuse the materials in the area to make it more human-friendly. The freshmen came up with properly documented data of the discarded material of their respective allotted areas.

Many useful materials were found which can be reused some way or the other. Initially, it was planned to seek permission from respective authorities to use the discarded materials and conduct and voluntary session to modify them into something useful. But later, it was discovered that it was not as feasible as expected.

Waste material surveyed in insti audit near various labs in Academic area

Cloth Collection Campaign :

Distribution of clothes collected through CCC

Cloth Collection Campaign is a big event of NSS Events department and it was conducted on a large scale covering the entire campus. We generally conduct it in two phases.

In phase 1 , all the hostel s including hostels 1 to 16, QIP were covered. The hostels were divided among all the students enrolled under NSS events. Last year, they were asked to visit each and every room of the hostel and tell them about CCC in first round but this time we made the proper Bins by using cardboard and thermocol and installed them at every hostel. Posters also being put up on the notice board of every hostels. We called a NGO named Green Yatra and donated them all the collected stuff in the every hostels which donate it further in villages where needed after segregation. This time we collect large amount of clothes, approx 3000 kg. It took 2 days to collect clothes from all the hostels.

Second phase of CCC took place in March 2017. In this phase, old clothes will be collected from institute staff and faculty quarters. A list of all the faculty buildings is prepared and students are divided into groups of four. Each group will be allotted a specific number of faculty quarters and they will have to visit their respective quarters and collect old clothes from them.

Republic day skit:

It is an admiring Republic day skit focusing on day to day sensitive issues as we are always up to.This time we planned to stage a skit, which was mainly directioned to create environmental awareness among the gathering. A script named 'Aawaaz' , which was prepared by the Activity Associates of the Events department was enacted by the freshman volunteers of NSS at the gymkhana grounds during the Republic

day function on 26th of January.

Aawaaz being a hindi word which means voice. So the skit was aimed at raising voice against the environmental degradation and showing people how correcting our small day to day activities could affect the environment.

The play had about eight scenes in it and the play required around four main characters namely ishaan, Ishaan's father, Ishaan's mother, and a teacher.

The freshman volunteers were been divided among themselves, so that some played a role in the skit, a guy as a narrator and the rest made the props which were required during the skit depending on the scene. This time the team increased the use of props than the previous year.

Since a stage play was been enacted on a public gathering, in order to give a stage feel the Activity Associates of the Events department planned to hold up screens during the play, so that it could give a confined feeling of a stage on the gymkhana grounds.

In order to throw light on the topic of environmental awareness, we planned to show up some of the particular means of environmental degradation such as wastage of water and waste disposal. In a light hearted manner the freshman volunteers depicted the means of unusual wastage of water through a scene in which the mother of ishaan keeps wasting the water while she is washing her kitchen utensils. In the same way the means of waste disposal was also enlightened by a scene in which Ishaan's father throws a litter casually on the road. In the following scenes, ishaan used to speak up with his teacher and with the help of his teacher he makes his parents realize them, what they are doing is wrong.

One moment during republic day skit

Placards were used to show up some valuable quotes written on it, which was holded up high during the performance. This time a new addition of backside screens were made, which had them written HAPPY REPUBLIC DAY, in order to show the occasion of performance. The other props involved were the basic needs of the skit such as the tables, sink, white board, buckets, litter, and utensils. Since the skit involved four main characters, we used four wireless mics and a wired Mic for the narrator. Background music was also introduced this time, in order to bring the skit more lively to the gathering. This required a participation of another volunteer so that he would play the background music in the necessary scenes. Props and costumes were all arranged by the volunteers and Activity Associates.

A moment during the republic day skit in gymkhana grounds

The entire freshman team was guided by the Activity Associates of the Events department during their practice sessions. Rehearsals were conducted daily, till the overall coordinators approved the performance. On Republic Day, the freshmen volunteers put on a performance that was worth a round of applause.

Best out of waste:

Recycling is a key component of modern waste reduction and is the third component of the "Reduce, Reuse and Recycle in waste hierarchy. This activity acted as a step towards cultivating an interest in volunteers about Recycling.

This session was very insightful for the volunteers to innovative usable objects using recyclable materials like newspapers, plastic bottles, cardboard etc and helped them to know how well they can efficiently make use of it. Large number of cold-drink bottles are thrown into waste daily. Our volunteers were guided and instructed on how to make bird feeder using waste plastic bottles and cardboards. The bird-feeders which were made by the volunteers during the session were installed in the Nursery in IIT Bombay .Here are the some glimpses of the session.

Volunteers using waste plastic bottles for making bird feeders

Orphanage visit:

Orphanage visit was conducted in month of February at Vatsalya Trust Orphanage, Kanjurmarg where most of the children are mentally and physically challenged
After interacting with orphanage children, some activities like Origami, Scientific Experiments were conducted to develop craft skill, scientific knowledge of children.

Our volunteers visited Vatsalya trust, an orphanage

Origami- Origami papers were distributed among children. Volunteers taught Orphans how to make bird with the help of origami paper. Children showed interest in this activity. Very nice origami was made by some children. We decorated their room with the origami made by them.
After these Activities some games were also conducted for having some fun with them. Overall the visit was awesome. Students learned a lot through activities and were really satisfied with what they had done.
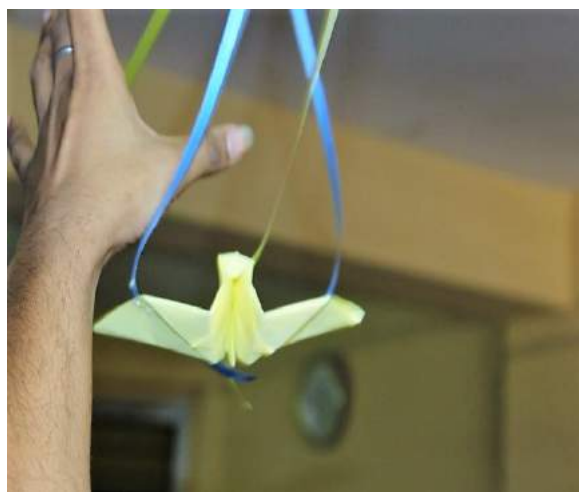
Origami and Scientific experiments session in orphanage

Scientific Experiments- Simple Science Experiments based on principle of water properties, effect of soap on water, inflating a balloon using chemical reaction etc. were conducted.This was the activity in which all children showed great enthusiasm. They were amazed with these scientific experiments. Volunteers explained the experiment in simple way and after that; children were allowed to do these experiments. They performed experiment nicely.

Old-age home visit

An old-age home visit was organised by NSS IITB on 25th March 2017. We got an opportunity to meet the senior citizens at Justice H K Chenani Elders Home. During the interaction with them we came to know about the lifestyle of 20th century and interests of people in those days. During the interaction, we met a math enthusiast in the house. 77 year old Mr. Gulab was still very enthusiastic about mathematics and advanced technologies. We came to know about his life through interaction. Through this visit we could share some happy moments with them.

Mr. Gulab, a 77 year old math enthusiast at the Old age home

National Innovational Club

About the Department:

We started with the name TechGSR (Tech Geek Social Responsibility) where we encouraged senior undergraduate and postgraduate students to find and create technical solutions to social problems. TechGSR formed the precursor to establishing the National Innovation Club, the student body of IIT Bombay aims to build a sustainable system at IIT Bombay which will promote the technical brains of IIT Bombay to create technology for development of society with a collaboration from learned professors, established institutes and citizens of India themselves and to create leaders and entrepreneurs in socio-tech field. We encourage our undergraduate freshmen to work upon these projects. We are running NIC as a department under NSS IIT Bombay

Link: `https://gymkhana.iitb.ac.in/~nss`

Smart Irrigation Control System:

We have made this prototype from scratch which switches off the irrigation system automatically once soil reaches desired moisture level. There are two functional components in this project. They are the moisture sensors and the motor/water pump. Thus the Arduino Board is programmed using the Arduino IDE software. The function of the moisture sensor is to sense the level of moisture in the soil. The motor/water pump supplies water to the plants. The moisture sensor measures the level of moisture in the soil and sends the signal to the Arduino if watering is required. The motor/water pump supplies water to the plants until the desired moisture level is reached. Once it reaches desired moisture level, it automatically stops irrigation system.
Following the link of demonstration video of working prototype:

Link: `https://drive.google.com/open?id=0BykSGYw7ieJqbHRyNUZKbUg3WmM`

Current Status: Working prototype is ready, but to make it easy to use, we are working on its user interface.

Projects for augmentation and value addition to grassroot innovations:

These includes taking existing working ideas and investigate with an engineering bent of mind how to even slightly improve the existing working solution. It is therefore not about forcing our solutions manufactured in labs but about complementing or supplementing existing solutions. All of these problem statements we received from **NIF (National Innovation Foundation)**

Improvements on Natural Water Cooler:

Taking the analogy from Natural Water Cooler prototype existing on NIF website with 100L capacity, we suggested design for 20L prototype and following improvements:

- Change in the way the Solar Panel is attached

- To keep a layer of water desiccant to dry the incoming air

- Improvements in Air flow and ventilation

Improvements on Sugarcane Bud Chipper:

It was the prototype existing on NIF website. We technically analyzed and suggested following improvements to NIF:

- Addition of rotary cutting blades to increase no. of strokes per blade

- Change in materials used and dimensioning to reduce cost and increase strength

- Structure of the bud chipper which can take input energy from human legs, not hands
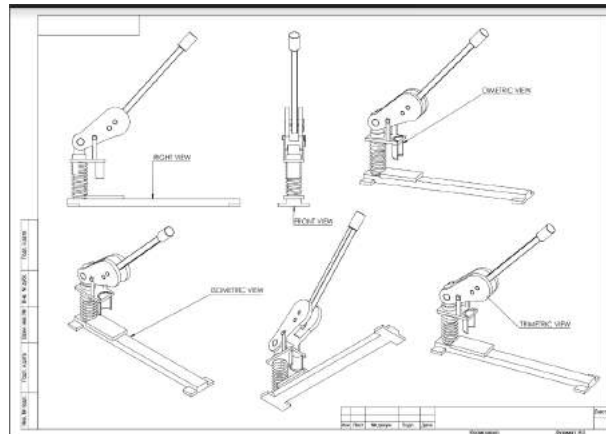
Drawings of the Sugarcane bud chipper

Improvements on Mitticool Refrigerator:

Worked upon the prototype of mitticool refrigerator existing on NIF website and suggested improvement on Surface Area, modification to install fans and modify the design to 2-Walled design.
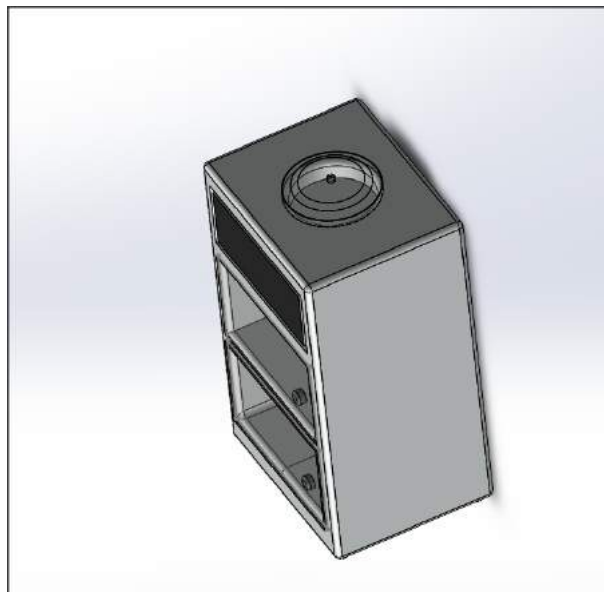
Solidworks model of the mitticool refrigerator

Recently Started Projects:

We received this problem statement from the local innovator of this pump Mr. Kamlakar. The prototype of the re-engineered model is ready for implementation. Following image is the comparison of the two models. The first is one made by Kamlakar (the innovator) and the latter is its reengineered and optimized model which is more sustainable and replicable. This pump takes energy from the velocity of flowing water.

- **Solar Powered Treadle Pump:** Working on existing treadle operated water pump in institute to make it solar powered. We are doing this to make that pump self-driven by using solar energy and to show the way to those who are interested to convert their manually driven pumps into self-driven pumps.

- **Smart Irrigation Control User Interface:** It's complementary project of smart irrigation control system explained above. Created an android app for its smooth execution by farmers through input control. This app involves input control, ideal moisture level table for different crops at different ages.

- **Improvements on Walking Sticks for Blind:**Working to modify the 'walking sticks for blind' prototype existing in NIF database. Created original prototype from scratch and working to modify the prototype ergonomically, economically and by adding more sensors.

- **Improvements on Tree Climber**Working on the modification of 'tree climber' prototype existing in NIF database. Modifying the prototype in its design and economy.
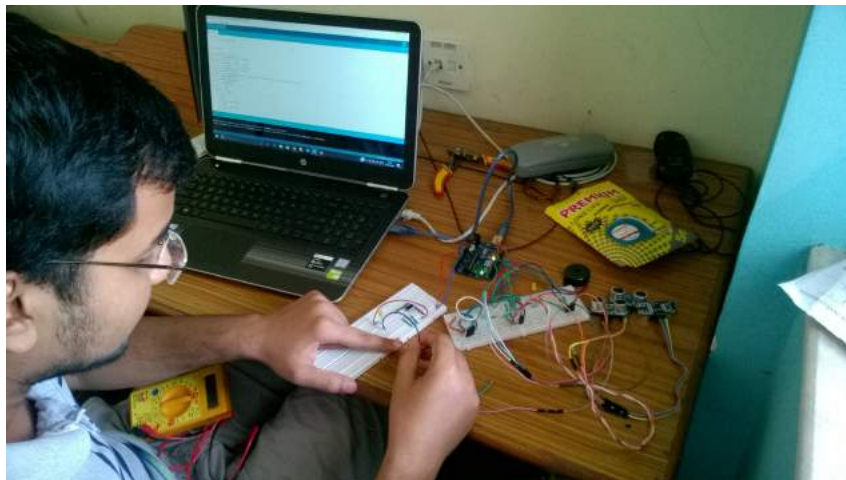
Volunteer working on walking stick circuit

Achiements so far:

Even though the department was launched this year, we were able to come up with the innovative ideas of the existing technical issues which were knowm through NIF. At the end of the semester all our efforts paid off. The department head of NIC (Shubham Patil) was invited to the Festival of innovation to present our projects. So Shubham Patil took represented NSS IIT Bombay at Festival of Innovation at the **Rashtrapati Bhavan**

NIC department head representing NSS IIT Bombay at Rashtrapati Bhavan

Common Activities

Friendship Day:

Last year, on friendship day, our Activity Associates tried to make some unconventional friends. They visited Ashadaan, a home for the abandoned and specially abled and Amcha Ghar, a residential home for orphaned and semi-orphaned girls, and spent time with people there, played games, and tried to give the people there some fun and joyful moments.

Studying in IIT Bombay is the first long stay away from the hometown for many students. While it opens up opportunities for the students, it also cuts them off from their close friends. Last year, on friendship day, NSS IIT Bombay gave the students, especially the first year UG students, an opportunity to send their message to their closest friends, to prove that distance doesn't affect their bond. A photo booth was organised in first year students' hostels where they put the messages for their close friends on a board and get a photo captured with it which they share with their friends later. Thus we gave students an opportunity to send their messages to their close friends in a unique way.

One of the activity associate penned down the experience they had when they made these unconventional friends. The same can be found at

Link: https://nssiitbblog.wordpress.com/2016/08/10/amcha-friend/

First year students holding board bearing special message for their friends back home

Cashless Drive after demonetisation:

The demonetisation in November received both positive as well as negative feedback from people. At the same time, government promoted the cashless transaction platforms for easy transactions. Under VISAKA program of MHRD, NSS IIT Bombay adopted the Powai Fish market consisting of fish vendors,vegetable vendors and other small shops. NSS volunteers visited the market in different shifts and introduced the vendors and consumers to the various modes of cashless transactions. We also helped some vendors in the installation of UPI apps and gave them a demo of these apps. The vendors were told about the advantages of cashless transactions and also about the various tutorial videos created by us on the different cashless transaction modes.

We did not limit ourselves to the targets of VISAKA and reached out to Phule Nagar area near IIT Bombay campus to create awareness among customers and vendors. Apart from the awareness drive by going to the shops, we also made videos tutorials about how to use different cashless transaction platforms. USSD, UPI, e-wallets, Debit and Credit cards, Aadhaar based payments and also the BHIM app was covered in these tutorials. These videos are in Hindi and uploaded on our youtube channel OLI. The links of the videos are given below. The video of BHIM app became particularly famous and reached over 5k+ views.

NSS team explaining various platforms for cashless transactions at fish market

- **Methodology Adopted in Fish market:**

  Methodology Adopted in Fish market:The market region was split in 3 parts and the volunteers were split in 3 groups. Each group was assigned one part. The volunteers made multiple visits to their parts and explained the benefits of cashless transactions and introduced the shopkeepers and the consumers to the various modes of cashless transactions, other than e-wallets. For those who required, we helped them install UPI apps and we shared links to the tutorial videos we had created on the various modes of cashless transactions. The response was mostly positive

- **Statistics about shops covered:**

  As mentioned before, the market consists of fish vendors, vegetable vendors and small shops. We visited approximately 50 fish+vegetable vendors and 30 small shops. Here are some statistics:

    – Nearly 100% of both vendors and shopkeepers knew about PayTM

– About 10% of the shopkeepers knew about UPI, while none knew about USSD.

– None of the vendors knew about UPI or USSD

– About 60% of the shopkeepers and 30% of the vendors were using PayTM already

– None of the shopkeepers or vendors used UPI or USSD

– About 20% of the shopkeepers and 10% of the vendors had card-swipe machines (PoS).

A few shopkeepers had placed the order when the visit happened and would get the machines functioning by the next month.

Volunteers explaining shopkeepers in Phule nagar about the cashless transactions

Links of the tutorial videos:

– **BHIM app:** https://www.youtube.com/watch?v=YvsYEXeCUes/

– **UPI, USSD and Paytm:** https://www.youtube.com/watch?v=KrH3blLmFVg&t=28s/

– **Internet Banking:** https://www.youtube.com/watch?v=-eevhBOEBnc/

– **Aadhaar Enabled Payment System (AEPS):** https://www.youtube.com/watch?v=EKnRIEviL-o/

– **Debit and Credit Cards:** https://www.youtube.com/watch?v=BzarNdWTGyk/

The Artistic Impact: a Pan-India Socio-Art competition

On NSS Day, nation celebrates the contribution of youth in social service. However, last year, instead of celebrating the contribution, we took a step forward and aimed to enhance it. We launched, The Artistic Impact, a pan- India Socio-Art competition on NSS Day aimed at encouraging the youth, and even the school children, to develop a social insight. This competition consisted three segments. We expected the participants to unleash their creativity to either highlight and provide deeper insights into a social problem, or provide an innovative original solution to the same.

The idea was to awaken the artist inside the young minds and give it the drive force to think for the society. Social Canvas, Click for Change and thINK were the three segments where we expected paintings, photographs and writeups/poems respectively from the participants. Many school and college students across india participated in the competition and gave some of the awesome entries. Winners were awarded with the certificates and NSS IIT Bombay merchandise. With this competition, we succeeded in reaching to the school children and sowing the seed of social service in their mind at this young age. The winner entries are shown here and the writeups which won the awards are available on NSS IIT Bombay blog.

Winning entry in Social Canvas and Click for Change

Winners' articles under thINK: `https://nssiitbblog.wordpress.com/category/the-artistic\`
`-impact-think/`

Letters of Love – Spreading Smiles in War Affected Areas.:

This was our first international activity. NSS IIT Bombay, in collaboration with Letters of Love, gave the IITB students an opportunity to spread smiles and give hope to thousands of kids in the UN Refugee camps who have seen a much darker side of the world, and who deserve a normal childhood. Letters of Love is a global initiative comprising of 35 people who undertook the responsibility of giving 10,000 hand-written New Year cards to the Syrian, Iraqi and Yazidi kids. To help them achieve their target, NSS IIT Bombay set up photo-booths in various hostel messes and the students wrote their New-Year messages for the kids along with a cheerful image of them. A total of 300 campus students participated in this activity. This initiative also appealed to many mess-workers, security guards and PHO workers in the hostels who came forward and participated in the initiative. Here are a few examples of the messages we received.

Letters of Love being handed over to kids in affected area

Some of the messages that we got from students

These messages were later translated in Arabic by the Letters of Love Team and converted into greeting cards. Their team was very happy with the response from IIT Bombay.

Letters of Love added 19 new photos — with Harshita Motwani and Yash Sanghvi.

November 29, 2016 ·

NSS IIT Bombay ❤️

These are just a handful from the lot we've received! The response was simply AMAZING !

A BIG THANK YOU to all students, mess-workers, security guards and hostel hall managers who showered their love with messages for the kids.

Together we're spreading smiles, instilling hope and expressing solidarity with the refugee children. 🙂
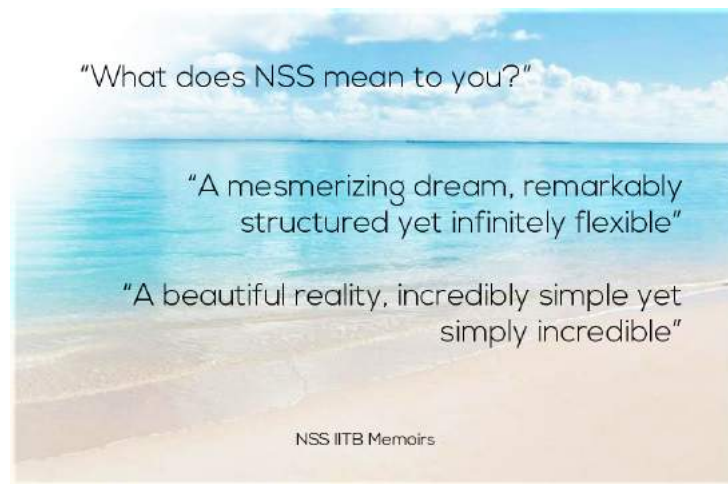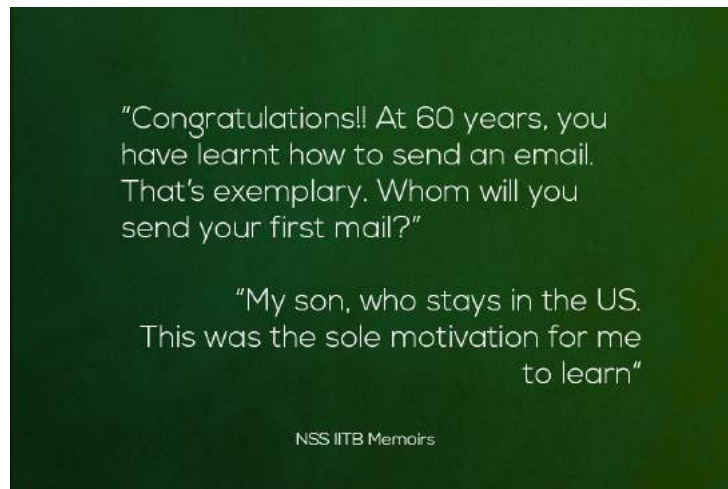
#LettersofLove2017 #IITBombay

Letters of Love thanked IIT Bombay for the support

We hope to continue this activity in 2017 as well, with greater participation from the institute student community.

NSS IITB Memoirs:

Based on the very popular Terrible Tiny Tales, we presented to the world, some real life stories of our volunteers in a concise way in the form of Memoir posts whose examples are given below:

"Congratulations!! At 60 years, you have learnt how to send an email. That's exemplary. Whom will you send your first mail?"

"My son, who stays in the US. This was the sole motivation for me to learn"

NSS IITB Memoirs

"What does NSS mean to you?"

"A mesmerizing dream, remarkably structured yet infinitely flexible"

"A beautiful reality, incredibly simple yet simply incredible"

NSS IITB Memoirs

Invisible Humans of IIT Bombay:

This is a series of posts featuring unheard stories of the people of campus whom majority of the residents know by face but nobody cares about their story. These people make our lives better at the campus and we think it is our duty to bring their stories and their dreams into the light.

Our activity associates identified many such people including a Bhutta Stall owner, Dhobi of Hostels, Librarian, SAC store incharge, Assistant Sports officer, friendly mess workers of hostel 10 etc. The student community of IIT Bombay likes these stories of people they see daily and we got positive feedback from them.

The dream of Bhutta shop owner shared through our series of Invisible humans of IIT Bombay posts

Media Coverage

IIT-B students on campus biodiversity treasure hunt

Based on a WWF study, 200 trees have been labelled and a location-based database is being put together

SHUBHA SHARMA
MUMBAI

Eight years after a World Wide Fund for Nature (WWF) study found 149 tree species on the IIT Bombay campus in Powai, students have used the study as a reference point to label them. With some help from the campus nursery, National Service Scheme (NSS) student-members have identified over 200 trees belonging to 40 species, with labels tied to trunks that bear common and botanical names and what makes the tree special or useful.

NSS volunteers have also created a database for the trees with their exact location. "These are trees on one side of the main road on campus; that's just 10% of the total campus area," Yash Sanghvi, overall co-ordinator,

Tree-mapping: Student volunteers label trees on the IIT Bombay campus SPECIAL ARRANGEMENT

NSS, IIT-B, says. The students now plan to go deeper into the campus to identify trees. "By a rough extrapolation, we need to cover at least 2,000 trees. The goal is to maintain

green cover by getting students involved in plantation and actively participate in tree maintenance."

During their initial study,

Wildlife on campus

- World Wide Fund for Nature mapped IIT Bombay campus from Sept. 2008 to Feb. 2009
- Study involved 140 days of field visits, covering 566 acres
- Campus divided into urbanised and vegetated sectors
- It has 100 species of flora and fauna protected under wildlife laws

843 TOTAL SPECIES

17% Vertebrate fauna
44% Flora
39% Invertebrate fauna
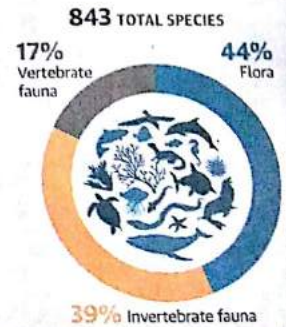
the students came across the world's tallest flowering tree and Tamil Nadu's State tree. Some species were exotic (not native to the area), says Pratik Babhulkar, head, NSS Green

Campus, IIT-B. "Either they were transplanted here, or someone took the effort to plant them."

Biodiversity mapping published by HT

BUSINESS INSIDER INDIA | India Insider | Budget Insider new | Tech | Careers | Finance | Strategy | Life | All

CAREERS

More : YouTube Yash Sanghvi National Service Scheme

An IIT Bombay student's channel is becoming a rage on YouTube, here's why

■ ANUSHREE SINGH | MAR 6, 2017, 05.31 PM

On account of the need for education rural youth in regional languages, a YouTube channel was started by IIT Bombay students one year back which hosts Mathematics and Science videos. It now has over 10,000 subscribers.

In just one year, the channel 'Open Learning Initiative' is reflecting a 4,000 per cent growth, that too without spending money on advertising.

Founded by Yash Sanghvi, an undergraduate student at IIT Bombay and the coordinator of the National Service Scheme, the channel has more than 170 videos in eight regional languages— including Marathi, Hindi, Gujarati, Telugu, Malayalam, Tamil, Oriya and Bengali.

Two videos are uploaded every week, and interactive learning by answering questions through the comments. The content is presented in a simple manner, explaining basic concepts. The channel reported a large demand for more videos from both teachers and students.

OLI channel being featured in Business Insider

Bio mapping reveals nature's secrets at IIT-B
■ Students decide to name and identify all trees on campus

AARTI BHANUSHALI
MUMBAI, FEB. 17

Nestled amidst the beautiful Vihar Lake in Powai, the IIT-B campus is a hub for flourishing biodiversity in the city. The students, in a bid to spread awareness about the diverse species of trees within the campus, have decided to name and identify them. This biodiversity mapping initiative by the Green Campus Department under the NSS team has marked over 200 trees of 40 species.

Yash Sanghvi, the coordinator of the NSS team, elaborated, "The campus is so lush with greenery and is one of the few green patches left in the city. We

A team of over 100 volunteers initiated the process and have marked trees on the main road of the campus.

decided to give the faculty and the students a flavour of this diversity. We have been mapping the flora and fauna on the campus for many years now but never showcased it. This time we were able to map over 200 trees and came across some very interesting facts as well".

A team of over 100 volunteers initiated the process and have marked trees on the main road of the campus. "The main road covers only 10 per cent of the campus and slowly we plan to cover the entire campus, which is over 550

acres," he added.

Raman Garase from the institute's nursery helped students verify the trees' identification. "We have been receiving some awesome reactions from the student community and the faculty members. The most common one being we did not know that all these years we were living amidst such rare gems!"

"We want to understand how the bio-diversity within the campus is changing over the years... We have been mapping a variety of species of butterflies and we're also maintaining a log of the same. We don't have plans to map insects and creatures, but perhaps we can initiate it in near future," Mr Sanghvi said.
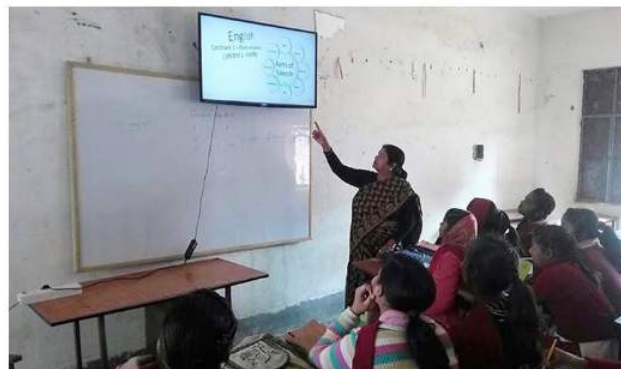
Biodiversity mapping published by Asian Age

OLI news shared by Indian Express featuring its use in Giridh District

Team NSS 2016-17

Faculty Coordinators:
Prof. Anand B. Rao
Prof. Ganesh Ramakrishnan

Overall Coordinators:
Yash Sanghvi
Kushagra Rai

Department Heads:

Educational Outreach:
Abhishek Majumdar
Archit Sanadhya

Events:
Muthamizh Selvan
Sai Sharan Veer

Vikas:
Ronit Saha
Swapnil Kandharkar

Green Campus:
Barre Prathyusha
Pratik Babhulkar

National Innovation Club:
Shubham Patil

Web and Finance:
Ashutosh Dhamale

Activity Associates:

Educational Outreach:
Aadarsh Parashar
Kesha Tamakuwala
Balreen Saini
Guru Vamsi Policharla
Varun Sant
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Aditya Malusare
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