

Gramaseva: Promoting Science at a Govt. High School, 17 Nov 2023 - A Report

Gramaseva is a unique outreach program initiated by our beloved founder Chancellor and implemented by Sri Sathya Sai Institute of Higher Learning, wherein the students and faculty of the institution go to villages and carry out various developmental work. The activities conducted in the three adopted villages Narasimhapalli, Bonthalapalli, and Marlapalli in the past include, repairing pipes to stop water pilferage, making a sports ground for the youth to play games to promote unity among them, making a volleyball court, renovating a temple on villagers' request, planting trees and giving saplings of fruits and vegetables to villagers on their request, conducting health and hygiene awareness camps, educational demonstrations, teaching concept through games etc.

Science Demonstrations at Govt. High School in Muddenahalli

This year as part of Gramaseva, apart from the activities in the three adopted villages, we also took upon additional activity of science demonstrations in the local school of Muddenahalli. This was done with help and collaboration from the Muddenahalli campus of SSSIHL. The identification of the school and the permissions for the visit were procured by Sri P Sunil Kumar, Assistant Professor, SSSIHL, Muddenahalli campus in coordination with the Director Prof Raghunath Sharma and Gramaseva coordinator Dr V N Ravi Kishore Vutukuri of SSSIHL, PSN Campus.

All three science departments namely Physics, Chemistry, and Biosciences came together under the banner of Gramaseva and initiated the idea of carrying out science demonstrations in Govt. High School, Muddenahalli on November 17, 2023. This is a local school that also happens to be a model school identified by the state government of Karnataka.

22 MSc students, 1 research scholar, and 3 faculty members boarded two minivans and left for Govt. High School, Muddenahalli at 10:15 AM. Each of the teams was led by faculty members Dr Santanu Roy, Dr K Naresh, and Dr V N Ravi Kishore. Research scholar Sri Sudhanshu Tiwari assisted the Physics team. After lunch at the SSSIHL Muddenahalli Hostel, the team left for the Govt. High School, Muddenahalli at 1:45 PM where they were received by the school teachers. The team was also accompanied by a group of 8 students from Muddenahalli campus. Also, the Gramaseva coordinator ensured all three groups had a couple of students who could translate and explain the science demonstrations in the local Kannada language.

After prayer, the entire team started setting up for science experiment demonstrations. At around 2:30 PM, all the groups started their demonstrations for classes 8th and 9th. The sequence of demonstrations is Session 1: Chemistry and Biosciences, Session 2: Physics and Chemistry, and Session 3: Biosciences and Physics. At any point in time, two parallel sessions were conducted and each session was for 30 minutes. During the demonstrations, tokens of appreciation were given to students for answering the questions asked by the respective teams. All the teams ensured school children's active participation in the events.

Towards the end, the SSSIHL team requested the principal of the school to felicitate the top three rank holders of 8-10 classes. This was followed by the distribution of prasadam to all the students, faculty, and workers of the school. The event ended with prayer and the team returned to Parthi by 7:30 PM.

The list of students, research scholars, and faculty members who participated in the event and the list of experiments demonstrated by all the groups are given below. Some of the GPS-tagged photos from the event are attached at the end of the report.

List of Experiments Demonstrated by Various Departments

A. Dept. of Chemistry

1. Demonstration of BaSO_4 precipitation with BaCl_2 with Na_2SO_4
2. Metal reaction with acid: Zn metal reaction with HCl
3. Displacement reaction: CuSO_4 reaction with Zn metal
4. Sodium reaction with water
5. Double displacement reaction: Lead Nitrate reaction with Potassium Iodide

B. Dept. of Physics

1. Classification of forces pushes and pulls from the demonstration of tug of war.
2. Demonstration of friction forces using, balls rolling experiment and intertwined books.
3. Demonstration of Sound propagation using a Toy Telephone.
4. Demonstration of magnetic lines of forces and the attraction and repulsion of two magnets.
5. Demonstration of Dispersion phenomena using a prism and sunlight experiment.
6. Demonstration of the concept of work and energy by using a simple pendulum.
7. Demonstration of errors in measurement using two balls and stopwatches by the students.

C. Dept. of Biosciences

1. Observation of Plant cells through Microscope
2. Observation of Animal cells through Microscope
3. Observation of Microflora from a water body through Microscope
4. Observation of soil bacteria through Microscope
5. Observation of stomata through Microscope

List of Students from Various Departments Who Participated in the Event

A. Dept. of Chemistry, MSc-II Students

1. Naga Manikanta Akula
2. Anmol Adhikari
3. Dattatreya Parija
4. Anil Ganta
5. Yaswanth Guntreddi
6. Sai Swaroop.R. Iyer
7. Mohana Krishna
8. Manikanta Uppada

B. Dept of Physics, MSc-II Students

1. Abhayakrishna
2. Bhargava Jogi
3. Rohan Pattar
4. Saikrishnan R
5. Shubam Paul
6. Nivas Gurung

7. Ujjawl Chethri
8. Om Singh

C. Dept. of Biosciences, MSc-II Students

1. Sai Kirthi Krishnan
2. Sahil Kumar Sahoo
3. K. Sukesh
4. Akash Rao
5. A. Tejith
6. Tulasi Sai Charan

DCHEM: 8 MSc Students +2 Faculty members = 10

DPHY: 8 MSc Students +1 Research Scholar = 9

DBIO: 6 Students +1 Faculty member = 7

Total = 22 students + 1 Research Scholar + 3 Faculty Members = 26 Members

All students were encouraged to participate in the science experiments and demonstrations, and they reciprocated by enthusiastically doing so, thoroughly enjoying each session. As the activities concluded, the children's faces lit up with joy. When inquired, the children expressed their delight in the demonstrations with their teachers and eagerly supported the idea of future sessions. The teachers too requested the team for more sessions in the future. In addition, the Principal and teachers requested support in teaching computer skills to the students as they currently have no one, although computers were available. The event concluded on a positive note, brimming with goodwill. Even the MSc students from SSSIHL who took part in the event were delighted, expressing their keen interest in organizing more such events in the future. Some M.Sc. students mentioned that this had been one of their most rewarding experiences in quite a while.

We are obliged to Bhagawan Sri Sathya Sai Baba and the Administration of our university for permitting us to visit and be of service to the school through this Gramseva. We are also grateful to the Director, PSN Campus, both the Wardens of the MDH & PSN Campus, and the Heads of the Department, for their unhindered support and enthusiasm. We are also indebted with gratitude to the Staff and the Principle of The Government School Muddenahalli for allowing us to interact with the students and lending us their invaluable support.

Dr V N Ravi Kishore Vutukuri

Gramaseva Coordinator

Prof Raghunath Sharma

Director



 **GPS Map Camera**



Puttaparthi, Andhra Pradesh, India

Vidyagiri Prasanthi Nilayam, 5R77+32M, Puttaparthi, Andhra Pradesh 515134, India

Lat 14.161954°

Long 77.812855°

17/11/23 10:06 AM GMT +05:30





Puttaparthi, Andhra Pradesh, India

3/113, Sri Sathya Sai Institute of Higher Learning,

Puttaparthi, Andhra Pradesh 515134, India

Lat 14.162477°

Long 77.812476°

17/11/23 10:24 AM GMT +05:30



Government Model School, Muddenhalli



Chemistry Department Students performing experiments and interacting with Students



Bioscience Department Students performing experiments and interacting with Students





Physics Department Students performing experiments and interacting with Students.