



DELHI TECHNOLOGICAL UNIVERSITY

NEW DELHI, INDIA



TEAM DELTECH LUNAR EXCAVATORS

Presents

OUTREACH PROJECT REPORT

“Spreading the wings of science and technology”

STUDENT MEMBERS:

ShubhamVerma (TEAM LEADER)
Arun Kumar Nauhwar,
Ashish Kumar, Peeyush, MdIrshadullahGharbi,
AshishKhurana, Vaibhav Sharma
Aman Raj, RohanRathore, AnkitDahiya

FACULTY Advisors:

Asso. Prof N.S. Raghava
Asst. Prof K. Srinivas

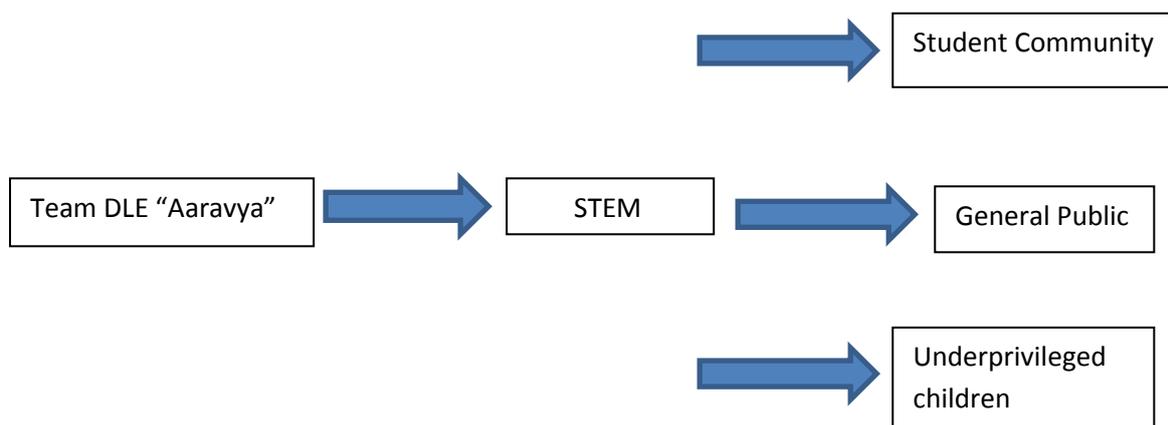
PURPOSE OF PROJECT

The primary purpose of the project was to spread Science, Technology, Engineering and Mathematics (STEM) skills among young school and college students and the general public. The aim of the team was to interact with as many people as possible to impart knowledge on practical robotics and NASA's space programs and research. The idea was to demonstrate how engineering can solve all kinds of problems and why the world needs skilful engineers to tackle the challenges posed to mankind in the future. The team wished to encourage more and more people to join the exciting field of science and technology.

TARGET AUDIENCE

The team divided the outreach project into the following 4 categories -:

- School students- To inculcate interests in science and technology at a tender age.
- College students- To motivate them to pursue a career in engineering and inform them of the exciting new developments in space exploration.
- General Public- Popular visitors' sites were targeted to impart knowledge about Lunabotics Mining competition and NASA's space research program among people of all ages and backgrounds.
- Underprivileged Children- To support them and encourage them to join these kinds of endeavours.



In this way, the team covered almost all the bases and were able to use different kind of techniques for different audience in popularising science and technology.

THE SCHOOL VISIT

The team first set out to various schools in Delhi to inculcate scientific curiosity among young students.

One hour seminars were organised so that they were neither too long such as to bore the students neither too short to miss out on important knowledge. Children were shown various presentations of rudimentary scientific principles and shown demonstrations of Robotics like basic line follower robots. In addition to it to engage the students, there was a General Science and Astronomy quiz which challenged students and helped the team to interact better.

The team also talked to teachers for putting emphasis on practical science in the curriculum.



THE COLLEGE VISIT

After schools, it was time to interact with other undergraduate students about NASA's Lunabotics mining competition and significance of the field of Science and Engineering. A 3 hour workshop on Practical Robotics was organised by the team in BhagwanParshuram Institute of Technology to demonstrate the basic principles of engineering. The workshop included distribution of kits to students and demonstrations to build their own basic robots. Students made robots in the workshop itself under our guidance. There was a presentation on how to make wireless and autonomous robots. There was also a debate on the role of science and technology in shaping man's future. The team also briefed the students about Lunar missions and what it takes to send a spacecraft on the Moon. Certificates were given to the participating students.



VISIT TO THE HISTORICAL MONUMENTS

The team then visited historical monuments as they are popular tourist attractions. Various kinds of people were present and the team took this golden opportunity to create awareness about science and technology and NASA's space programs and research. The team visited India Gate, the Red Fort and the Qutub Minar. The team prepared a set of pamphlets and circulars to be distributed among the public containing all the relevant information. The team along with the Lunabotics Mascot interacted with many people and briefed them about our project laying emphasis on engineering. The team initiated talks about Engineering among various sections of the society and public demonstrations of robots were shown.



VISIT TO AN ORPHANAGE

The team visited an orphanage called “ARYA”. The team members spread awareness about NASA and its space program among the children. A slide presentation on basic mechanics and Electronics was shown to the children. There was a demonstration of Line follower and 4 wheeled robots to inculcate interest in robotics among the children. The team talked about STEM (Science, Technology, Engineering and Mathematics) and how they can contribute to the world by taking up engineering.



STATISTICS AND FEEDBACK

The team was able to interact with about 300 school children, 250 college students, 100 Orphanage children and about 800 people among the general crowd. So in total, the team managed to interact with about 1500 people in a period of 5 months. People across all ages were covered.

In schools and orphanages, the team distributed worksheets for children and in colleges feedback forms were distributed. The children were very enthusiastic and showed healthy levels of curiosity in both quizzes and demonstrations. The college students also gave a positive feedback and wished to be associated with our team and also expressed a desire to participate in a similar competition themselves. The school authorities were satisfied and asked us to come every year to encourage young curious minds.

The outreach project helped the team to realise NASA's and its university's dream to spread awareness on science and technology. India is a developing country and needs technological manpower in its path to become a developed country. Such competitions encourage youngsters to undertake scientific and technological research. Earth's resources are depleting quickly and budding engineers need to know that Lunar and other space missions are important for mankind to survive for long.

The team wishes that it was successful in inspiring a lot of students to take up this exciting profession.