

BEST PRACTICE 1

Community Outreach Program “FASCINATING WORLD OF SCIENCE”.

The program is designed for the School children studying in standard X.

The purpose of the present outreach program is:

- a. To introduce and thus create curiosity about science world amongst the students who are on the threshold of choosing their career path.
- b. To provide information about the programs related to pure sciences conducted by our college
- c. To guide them on careers in science at UG and PG level and beyond
- d. To make them aware of the vision and mission of Chembur Trombay Education Society (CTES) and so bright chances they have for getting higher education, inspite of their financial and social weakness

Being aware of the low social and economic levels of the nearby community of Chembur, Govandi, Deonar and Ghatla area, the CTES always take initiative to provide support through our community outreach programs.

It was observed by our science faculty teachers that the experimentation facilities available in the schools in the vicinity are of lower level than expected. When students conduct experiments they easily understand the concepts underlying those experiments. Either the laboratories of some schools in the vicinity are not well equipped or they do not have provisions for replenishing the material required for these experiments. Such scenario leads to low understanding hence dislike amongst the school students about science subjects. This was evident from the low intake in the pure science programs against the high demand ratio in commerce programs in our college.

A one day workshop “Fascinating World of Science” is organized since the academic year 2016 by the Faculty of Science of our college which includes Departments of Physics, Chemistry, Botany, and Zoology. The aim of this activity was to arrange for exhibits and demonstration experiments for standard X school students from nearby schools. Most of the experiments

displayed were based on standard X syllabus and a few related to advancement in science and technology.

A committee of teachers from Faculty of Science is constituted for the proper execution of the program. This committee studies the syllabi of Std X, makes the list of schools to be invited, and prepares invitation letters, makes a list of exhibits, demonstration experiments, videos to be shown and some very short experiments which students can conduct on their own.

Every year nearly 120 students and 12 teachers from different schools participate in this outreach program.

Generally the participating schools are Kumud Vidyamandir, Chembur High School, Ghatla Municipal School, RST Madhyamik School, Sarawati Vidyamandir and Swami Muktanand High School.

The students are divided into 4 groups and by rotation they visit 4 different departments of science.

Demonstration experiments like in physics like dispersion and reflection of light, heating effect of electric current, faraday's law, digital thermometer and optical telescope are displayed to provide them with additional information in modern technology. Observing the spectrum of light and deflection in the galvanometer due to magnetic induction was altogether a different experience for them. They were amazed by the wonder effect of laser beam showing light travels in a straight line and optical fiber which can bend light through pre-determined path. In chemistry, processes like Distillation, Crystallization, Titration, introduction of instruments like pH meter, conductometer, polarimeter were demonstrated. Attractive presentations for topics like Dissection of flower - *Rosa sinensis* and parts of flower, slide of spirogyra, advantages of fungi (Specimen), evolution in plants, best from kitchen waste, PPT on different types of insectivorous plants, charts on pollination and Slide of stomata from leaf section are highlights of exhibits each year.

Some power point presentations on topics like Chandrayaan-2 made by SYBSc students and videos on topics like 100 discoveries in science are greatly enjoyed by all the visiting schools.

In this activity SYBSc and FYBSc students worked as volunteers in managing the crowd and also explaining the exhibits.

The students were fascinated by the demonstration experiments as they had read the theory in the text book but not had a practical experience. This is evident from the contented and smiling faces of the students. The students even after their time for particular demonstration is over, were unwilling to leave those laboratories. They were curious to understand more about the topic and asked many questions. This exhibits their willingness to gain scientific knowledge. This program also feeds to their inquisitiveness. They ask us about taking admission in our college for pure science programs. Teacher's quilt those with the different careers with pure sciences as base.

Feedback from students and school teachers are obtained. Their positive remarks motivate us to improve on the betterment of this outreach program.

A letter of appreciation is given each year to our college by Kumud Vidya Mandir for our initiative as a step towards betterment of the society and helping young mind in their journey of science education.

It is difficult to get common and free slots for all the laboratories to conduct this program. Sometimes some schools conduct their unit tests on the scheduled days of the program. In that case, we have to reschedule the program. It is challenge to design very short and safe experiments for such young teenagers to conduct on their own. Some schools on receiving invitation from our college, are not willing to send their students as they too have to make arrangements for the same. In that case, we have to persuade through our Principal to the higher authorities of that school by explaining the purpose of this activity.