

USO School Outreach



**Udaipur Solar Observatory
School Outreach - 1
Govt. Boys High School
Dewali, Udaipur
03/09/2016**

Event Description:

USO School Outreach program was conducted on 3rd September 2016 at Government Boys High School, Dewali, Udaipur. It was conducted for students of classes VIII-X, who were around 100 in number. We had around 10 volunteers from USO and the duration for the programme was 2 hours, 10.30 AM - 12.30 PM. The medium of instruction was Hindi.

The following 3 modules were prepared for the event (each of duration of about 45 minutes):

1. Talk: Introduction to the solar system
2. Astronomy Kits
3. Optics experiments

First the talk was given for all the students by Dr. Sanjay Kumar and Mr. Ranadeep Sarkar. Following this, the kits and optics sessions were held in parallel sessions with the groups of about 50 students each.

Details of each module:

1. Talk: A journey through the Solar system



The talk was presented to the students by Dr. Sanjay Kumar and Mr. Ranadeep Sarkar. It mainly comprised of many videos aimed to capture the imagination of the students and enthrall them towards astronomy. The talk gave the students an overview of all the members of the solar system, with special emphasis on the role of the Sun. They were also told about the various scientific activities that are routinely carried out at the Udaipur Solar Observatory. The scale of the solar system was also discussed with the help of a demonstration kit.

2. Astronomy Kits:



The students were given an introduction to the night sky using the Stellarium software. They were shown the motion of stars and constellations with special emphasis on the importance of the pole star. The theme of the activities were to enable the students to 'see' the night sky from any location on earth. We started with the 'starclock' which was an easy to use kit which could help the students in locating the pole star if they knew the current time, and could see Cassiopeia and Big Dipper (which are comparatively easily identifiable constellations). The next step was to teach them to use a handy paper-made 'clinometer' to find out the latitude of their geographical location. The latitude would be used to make a 'sundial' adjusted to their specific latitude, to see the time without the help of a clock. Finally, a star chart was also provided for the night sky, which included all the major constellations. They could use the latitude to create their own star chart, and use the local time and date to identify the sky above. In addition to the demonstration of the kits in class, all the kits (Starclock, Clinometer, Sundial and Star Chart) were distributed to the students as cut-away pages of a booklet with adjoining instructions in English and Hindi for facilitating a DIY (do it yourself) approach from their side.

3. Optics experiments :

With the help of the ray diagram, the working of the telescope and the different types of telescopes were explained. The different components of the telescopes were shown and demonstrated their functioning.



Discussions and feedback

The feedback from the students was collected in the end, which will help planning future programmes/events in an efficient way. There were only few school authorities maintaining discipline among the students.