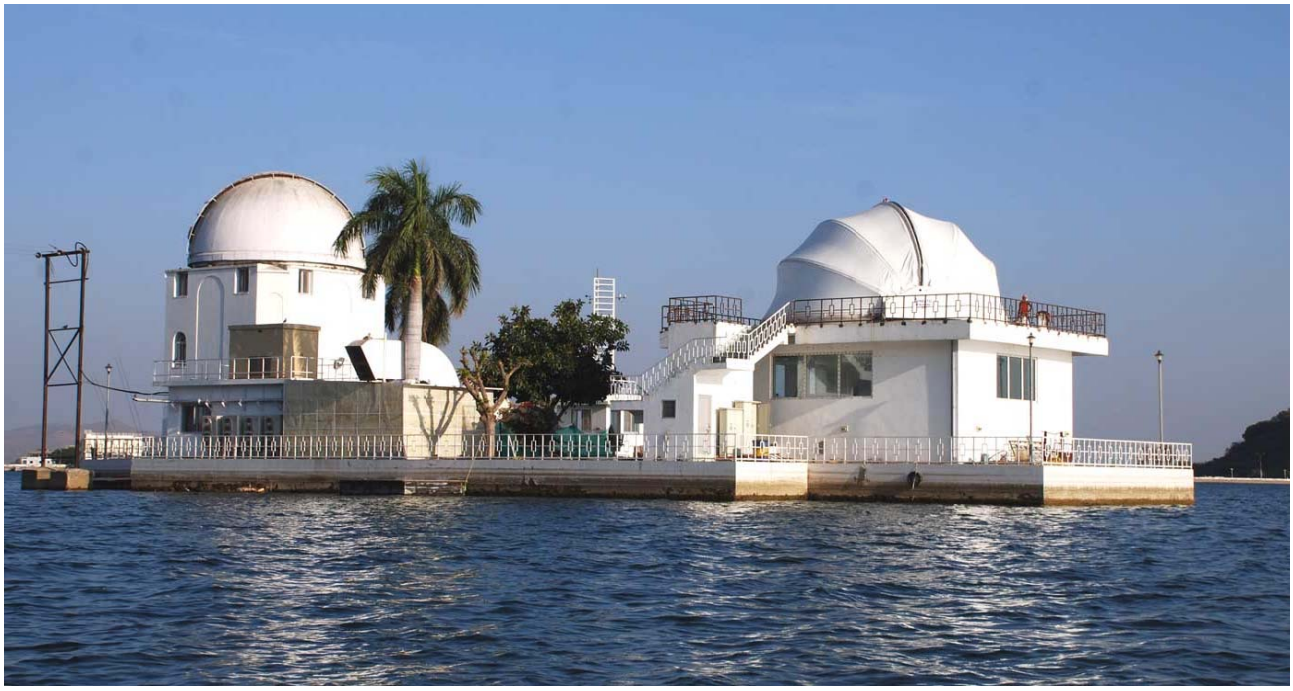
USO School Outreach



Udaipur Solar Observatory
School Outreach - 2
The Study School
Tehsil Girva, Udaipur
07/01/2017

Event Description:

The second USO School Outreach program was conducted on 7th January 2017 at the school The Study, Tehsil Girva, Udaipur. It was conducted for students of classes VIII-IX, who were around 120 in number. The students were divided into two batches with 60 students in each batch and parallel sessions were conducted. We had around 8 volunteers from USO and the duration for the programme was 2 hours, 10.30 AM - 12.30 PM. The medium of instruction was English.

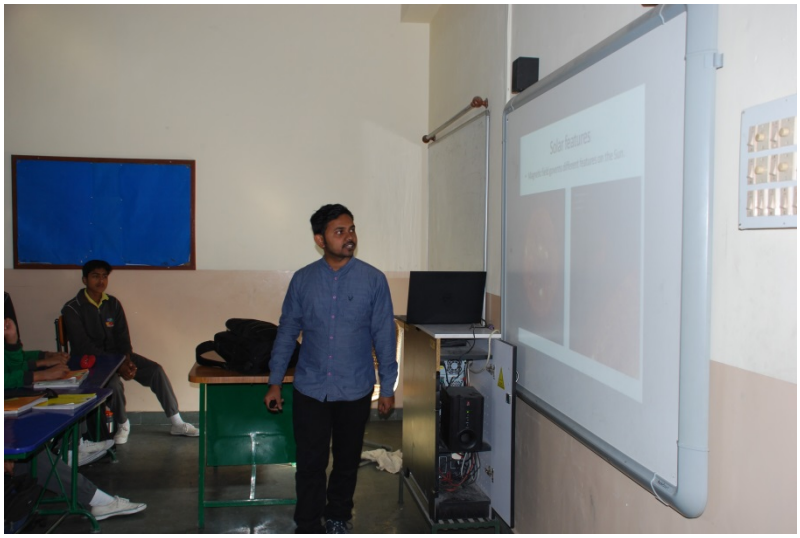
The following 3 modules were prepared for the event (each of duration of about 45 minutes):

1. Talk: Our Sun
2. Astronomy Kits
3. Optics experiments

First the talk was given for the students by Mr. Rahul Yadav and Mr.Ranadeep Sarkar. Following this, the kits and optics sessions were held in parallel sessions.

Details of each module:

1. Talk: Our Sun

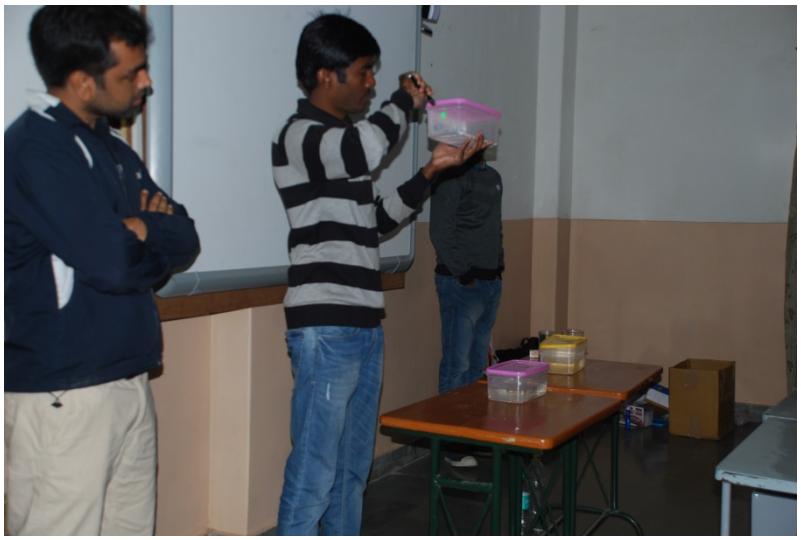


The talk was given by Mr. Rahul Yadav and Mr. Ranadeep Sarkar with the aim of introducing the nearest star – the Sun, to the students in detail. The presentation dealt with the topics like the distance of the Sun from earth and size of the Sun, internal structure of the Sun, different features we see on Sun and effects of the solar radiation on us. The students were curious to understand why do we have to study the Sun. In this session we also aimed at informing and educating them about the facilities that exist at Udaipur Solar Observatory – Multi Application Solar Telescope (MAST) and the science we do here. Starting with the question of why the telescope is in the middle of the lake to the structure of MAST were addressed. The information about the facility that exists in the city to which the students belong kindled the interest in the them.

2. Astronomy Kits:

This session was aimed at introducing the students to the star clock. The session began with the introduction to Stellarium software where the students were shown the realistic night sky like they would see through naked eyes. They were shown the motion of stars and constellations with special emphasis on the importance of the pole star. Then they were thought how to identify the pole star with the help of the constellations Cassiopeia and Big Dipper which are easier to identify. Also the emphasis was given on the fact that these constellations are separated by around 180 degree and hence one of them can be seen at any point in the night sky and thus it makes the identification of the pole star easier. The theme of this activity was to enable the students to 'see' the night sky from any location on earth and make their own clock to read the month and time. We thought them how to make a starclock from scratch and with the help of stellarium we proved to them the starclock works perfectly at any place and at any time. During the course of this activity, we introduced them to the important concepts of rotation of the earth and revolution of the earth around Sun and their implications. In addition to this, a cut-away pages booklet containing details of other astronomical kits like Clinometer, Sundial and Star Chart was handed over to the principal of the school 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 their functioning was demonstrated.

Discussions and feedback

The feedback from the students was collected in the end, which will help planning future programmes/events in an efficient way.