Young minds from city schools explore astronomy at IUCAA camp

Swaril Shinde | Pune

Pune: A group of 200 secondary school students are trying to find out the diameter of the sun, crunching numbers to calculate the distance of the sun from the earth, making a pinhole camera, learning about the solar system and getting hands-on experience on several astronomy and science experiments.

These students have been selected for a summer camp organised by the Inter-University Centre for Astronomy and Astrophysics, Pune; concepts in science and astronomy are taught simply and students interact with scientists and resolve their queries during the week-long camp.

Venkat Manmikar, a participant, has measured the diameter of a mustard seed comparing it to that of the sun. "On day one, we were told to forget all the science we had learned in school and start anew. Our trainer asked us to measure the tallest building around. Initially, I thought that would be impossible, but then ideas began to form in my mind and eventually we found at least 10 to 15 ways of measuring it," he said.

Sreeha, another participant, said they were learning lessons they could have only imagined. "Science has become so simple and I am no longer scared of it. We have made pinhole cameras and we measure the sun dial among other things."

The camp is being conducted for 120 school students in Pune since early May. Weekly batches of 30 students spend time working at the IUCAA Muktangan Vidyan Vidhikra. The aim is to give an overview of an astronomer's tools to school students through child-friendly, but structured, contest and experiments.

Chinmay Gala, a participant, said, "The best part about the camp was that we made the instruments on our own that were used for experimentation. Those were simple instruments, but it gave so much joy to put them together and begin experimenting."

Tarang Shukla, said the concepts of astronomy were simplified and it was no more a complicated topic. "As the summer camp comes to an end, I have developed so much interest in astronomy that I would not mind taking it up as a career," he added.

Nikhil Apte had learned much more than what he did at school. "We have learned the basics of some concepts including the universe and the solar system or how far the sun is from the earth. But here, we measured the distance, which makes it so much easier to understand," he said.

IUCAA's summer camp project lasts for six weeks in April and May where children from city-based schools are invited to spend time at the centre. Every week, a batch of about 30 students does some hands-on projects. These students are attached to a working scientist so that they get a feel for sciences.

Participants of the summer camp measure the sun's distance from earth using the measuring instruments made by them.

DISCOVERING SCIENCE

- The topics covered simple geometry and statistics to details of optics and spectroscopy
- The students worked on measuring the diameter of a mustard seed to the ratio of the distance to the sun
- They used the IUCAA Samrat Yantra for studying trigonometry as well as the celestial motions of the sun
- Star map reading and sky watching practice sessions were held for all the students on Friday evenings

The workshop not only makes them perform experiments and teaches concepts, but also develops an attitude towards science so that more children think of it as a career.

Ramjee Misra | PROFESSOR AT IUCAA

(He has conducted a few sessions and has been associated with the summer camp for the past 12 years.)