

SPACE celebrated vernal equinox with students by measuring the Earth's circumference at Jantar Mantar



New Delhi, 20th March, 2014: SPACE the pioneer organization working towards the development of science and astronomy in India, today celebrated the day of vernal equinox by measuring the circumference of the Earth with its associated students and conducting a heritage walk at Jantar Mantar.

About 55 school students from class VI to VIII participated. 11 schools from Delhi & NCR participated, including Bal Bharti Public School - Rajendra Nagar, Indraprastha International School - Dwarka, GD Goenka Public School-Rohini, Sachdeva Public school - Rohini, Amity International School – Pushp Vihar, Gurgaon, Noida, Saket and Vasundhara, Chinmaya Vidyalaya – Vasant Vihar, Navy Children School – Chanakyapuri.

Most of the participating schools achieved more than 90% accuracy in their results.

This experiment, also known as the Eratosthenes Experiment, was first done by Greek Astronomer and Mathematician Eratosthenes around 240 BC, where he calculated the circumference of the Earth using knowledge of the angle of elevation of the sun at noon.

This year, SPACE also participated in an international activity – ‘The Eratosthenes Experiment 2014’ which is organized in the framework of the Open Discovery Space Project, an educational outreach programme based in Europe. Under this framework, students from schools across the world will measure the Earth’s circumference by performing the experiment of Eratosthenes. They will partner with cities along the same longitude, share the data and make the calculation jointly with those cities.

With the help of experts at SPACE the students replicated this experiment wherein they used the shadows cast by the sun to calculate the circumference. The participants were also taken on a guided walk around Jantar Mantar where they learnt about the usage of the ancient instruments. They also learnt how to calculate the circumference once the sun’s angle is known.

Through this experimentation project students learnt how simple it is to deduce the circumference of the Earth while still being present at a given location. Our educators also helped them understand the rich scientific heritage of India by introducing them to the instruments at Jantar Mantar. The location was chosen by SPACE to educate the children about the importance of preserving our heritage for future generation.

This project has also been accredited in a panel discussion on 'Astronomy along Highways and Public Places' held at Nehru Planetarium, Delhi in February 2013, by French Professors, Prof. Denis Savoie and Prof. Bonnet Bidaud.

Ms. V. R. Geetha, a student co-ordinator from Bal Bharti Public School, Rajendra Nagar said, "Session was well conducted by SPACE group members. The working of various yantras was well explained by SPACE educators. This is nice way to popularise hands-on science and promote learning in an informal atmosphere as a group activity. "

Ms. Aditi Sharma, a student coordinator from Sachdeva Public School, Rohini said, "The session at Jantar Mantar was quite interesting. There was a lot more to explore at the location. The information that I gathered was quite thrilling. The overall session was knowledgeable."

About Project Paridhi

This project was initiated by SPACE 4 years ago **with the intention to increase awareness amongst Indians that science can be done without any complicated equipment.** Under this project the students find out the circumference of the Earth by taking measurements of the shadows made by the sun in a day to calculate the size of the Earth and its shape, as done 2300 years back by astronomer Eratosthenes, who was able to measure it within 2% of the present accepted value. Project Paridhi can be done on any day of the year, but on days of equinox and solstices the sun's position is optimized for calculations. Gnomons (a Greek word for an object whose shadow serves as an indicator of time, especially of the hour of the day) of all sizes and shapes have been used - including soft drink bottles and cricket wickets to huge gnomons such as Samrat and Ram Yantra at Jantar Mantar and sundial at Barapullah. With the help of this project conducted at our heritage site Jantar Mantar, SPACE has highlighted that such Indian monuments can be used as tools to demonstrate and get the common man interested in science.

About SPACE

SPACE, the pioneer organization working towards the development of science and Astronomy in India, is an ISO 9001:2000 certified company which has been changing the face of Science and Astronomy awareness, education and innovation in India through path-breaking concepts, services and programmes. SPACE, has not only successfully implemented astronomy and space science curriculum in Indian education system but has also been able to provide International platforms to Indian students where they distinctively contribute in scientific discoveries at a very early age. SPACE, constantly strives to use scientific and astronomical programs to foster scientific temperament in society, especially among the youth who are the harbingers of India's future.

Our Flagship Projects

- Project PARIDHI
- All India Asteroid Search Campaign- AIASC
- Sally Ride Earth KAM (Earth Knowledge Acquired by Middle school students)
- Project Dark Skies
- Kalpna Chawla Quiz Contest
- Internet Telescope
- Project Khoj
- Heliodysey
- Hydro Rocketry Design Competition

For more information please log on to:

SPACE Website: <http://space-india.com/project-paridhi-vernal-equinox.html>

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