

Monthly Descriptive Report of programs and activities organized at Nehru Science Centre, Mumbai and its Satellite Units for the month of March, 2024

NEHRU SCIENCE CENTRE, MUMBAI

Package Tour

During this month, in all 23 (4,875 visitors) package tours were organized for students and teachers. Guided tour to the galleries, Science Odyssey, Science on Sphere show and Science Shows were organized for them.

Mobile Science Exhibition: Vaccines Injecting Hope

Mobile Science Exhibition (MSE) toured to various local schools of Thane and Palghar Districts, and the surrounding regions. The Exhibition has covered 28 sites so far within the Thane district. 11,188 students, teachers and other visitors visited the exhibition.

Creative Science Camp for Pratham Education Foundation

2 residential Creative Science Camps were organized for the students from remote areas of Maharashtra on 01.03.2024 & 02.03.2024 and 05.06.2024 & 06.03.2024 at the Centre. 47 & 43 students and teachers participated in the camp respectively. The participants were given exposure to the various hands-on activities based on Physics/Mechanics along with the facilities of the Centre.

Innovation Hub Sessions

During the month the Centre organized 04 sessions for 27 students enrolled in the Innovation Hub program. These sessions took place on 02.03.2024, 09.03.2024, and included sessions on biotechnology on 16.03.2024 & 17.03.2024. The primary goal of these sessions was to provide practical knowledge and hands-on learning experiences. The Innovation Hub session for the Integrated Science batch January - March 2024 concluded by giving certificates of participation to all members on 17.03.2024.

Experimental Skill Test

The Centre in collaboration with the Bombay Association for Science Education (BASE), conducted the Experimental Skill Test at the Centre on 17.03.2024. 14 students out of 16 registered students appeared for the test. During the test, the students were provided with experimental setups and were expected to conduct experiments under the supervision of experts from the Centre and BASE. The primary objective of this initiative is to evaluate the participants' ability to perform experiments and demonstrate their observational skills.

Women's Day Celebration

- **Skin care products workshop:** A Workshop on making plant-based skin care products was organized at the Centre on the occasion of International Women's Day on 08.03.2024. The resource person for the workshop was Ms. Maitri Bheda, the founder of Plants Academy. The speaker gave the group a general overview of skincare products during the session, outlining their makeup and principles of operation. Also, the participants were taught how to make soap, Lip balm & skin Toner and how to successfully use various other homemade products in daily life. The workshop had 28 participants.
- **Make and Take Workshop:** A hands-on activities focusing on sound, resilience, and flying objects were organized for the girl students. The "Dancing Snake" activity explored sound through rhythmic movement, while the "Caterpillar" session fostered discussions on resilience. In the "Rotocopter" activity, attendees designed and tested mini-rotocopters, celebrating innovation. 96 girl students participated in the workshop.
- **Chalte-Chalte Quiz Competition:** A "Chalte-Chalte Quiz" was organized at the Centre, held across various galleries. The quiz featured general knowledge questions focusing on women in the news and women in science, engaging a total of 42 participants. This interactive session provided participants an opportunity to test their knowledge and learn more about the contributions of women in the field of science.

National Oral Health Day

The Centre on 20.03.2024 commemorated National Oral Health Day. An awareness lecture by Dr. Sunali Khanna, Associate Professor at Nair Hospital Dental College, Mumbai, was organized at the Centre on this occasion. The lecture focused on various aspects of oral hygiene, emphasizing the significance of routine check-ups and addressing the prevailing lack of awareness regarding oral health. Dr. Khanna elaborated on the impact of lifestyle changes on oral health and stressed the importance of regular dental examinations. The lecture also included a Question-and-Answer session, encouraging active participation from the audience. A total of 360 students attended the session.

National Immunization Day

On 16.03.2024 the Centre hosted an awareness session highlighting the importance of vaccination and a special immunization camp was conducted on the same day as part of National Immunization Day. There event saw participation of 189 participants.

World Water Day

The Centre on 22.03.2024 organized an online quiz contest on the theme 'Water for Peace' from 12:00 noon to 10:00 pm to mark World Water Day. 282 participants answered quiz focused on water conservation and sustainability. The event aimed to raise awareness and encourage action for water preservation.

RAMAN SCIENCE CENTRE AND PLANETARIUM, NAGPUR

Vintage Car Exhibition 'Heritage on Wheels'

The Centre and Cent Ind Vintage Automobile Association (CIVAA) Nagpur in a joint venture organized a Vintage Car Exhibition 'Heritage on Wheels' on 03.03.2024. 25 vintage cars and 10 bikes were on display during the exhibition. Shri Narendra Saffale, DGM - Tractor Manufacturing Division, Mahindra & Mahindra Ltd, Nagpur and Shri Kartik Kale, Director, Jaika Motors, Nagpur inaugurated the exhibition. Shri Shahrukh Cassad and Dr Anjan Chatterjee from CIVAA were prominently present on the occasion. The Exhibition received huge response from visitors and students as 3215 visitors visited the exhibition.

Science Museum School

Science Museum School programme for the year 2023-24 which was started on 22.08.2023, culminated on 07.03.2024. An awareness lecture was organized for 35 underprivileged students of 5th Std from Maharashtra Adhyayanmandir on 'Health, Hygiene and surrounding'. The lecture was delivered by Dr. Anand Bhutada, Pediatric Intensivist & Neonatologist and Director, New Era Mother and Child Hospital, Nagpur. Dr. Shweta Bhutada, Consultant Ophthalmologist, New Era Group, Nagpur also interacted with the students on 'Ocular Health'. Shri Milind Nannavare and Shri Barai, Principal, Maharashtra Adhyayanmandir, Ganeshpeth and Gandhinagar Branch respectively, expressed their views on the project and the improvement they can see in their students. The programme was supported by an NGO Nishchay Foundation, Nagpur.

Anniversary Day celebration of Raman Science Centre & Planetarium, Nagpur

32nd Anniversary of Raman Science Centre & Planetarium, Nagpur was celebrated by organizing various programmes for students on 07.03.2024 viz: Open House Quiz on theme 'Science around us', science demonstration lecture on 'Fun at Low Temperature' etc. 80 students from different schools participated in this celebration.

Test Your Experimental Skills - Level 1

9th Experimental Skill Test was conducted at the Centre in collaboration with Bombay Association for Science Education, (BASE) Mumbai on 17.03.2024. 14 students (Std 8 to 12) enrolled for the programme. The assessment of the students was done by assigning two science experiments (without any choice). These experiments were on any topic of science (not discriminating between Physics, Chemistry & Biology). Direct measurement of physical quantities was involved in Level-1. 6 Observers, Ex-HoD, Professors, PGT from Colleges and Schools (2 each from Chemistry, Physics & Biology) were present during the test. The criteria were to observe the experimental skills of the students on how they take readings, do measurements, plot graphs, do calculations, data presentation etc. Based on the observations made by examiners during experimentation & marks scored in the written test, the students who scored 75% and above marks awarded with Certificates.

Pratham collaborative event for underprivileged students – 3 nos.

The Centre in collaboration with NGO - Pratham Education Foundation organized 3 Hands-on cum Exposure Camps workshops at the Centre. The workshops were scheduled on 05.03.2024-06.03.2024, 13.03.2024 to 14.03.2024 and 19.03.2024 and 20.03.2024 on the topics 'Mechanical Toys', 'Energy' & 'Machines' respectively. During the 1st workshop (5-6 March) on theme 'Mechanical Toys', various hands-on activities such as climbing butterfly, balancing nails, flying toys, simple motor, flying bird, vibrating snake, catapult etc. were made by the participants. A special programme on 'Mechanics of Flight' was organized for the students. 35 underprivileged students from Ramtek, Sillari, Pench area of Nagpur region participated in the camp.

During the 2nd workshop (13 & 14 March 2024) on theme 'Energy', Students made various science kits related to Gravitational energy, Sound energy, Electrical Energy, anemometer, wave motion, simple motor etc. A film on topic 'A visit to Nuclear Power Plant' was screened during the workshop. Also, a special demonstration of 'Sterling Engine' & 'Chemical Reactions and Energy' was organized. Energy Games, Open House Quiz on 'Energy' was arranged for the participants. 32 underprivileged students from Chandur Railway, Amraoti Region and Parsioni, Nagpur Region participated in the camp.

The 3rd workshop on theme 'Machines' was organized on 19 & 20 March 2024 for 37 underprivileged children from remote areas of Akola District and Ramtek area, Nagpur District. During the hands-on session students made projects such as roll back can, convection current spiral, magnetic spinner, vibro-bots, Pulleys Lift Loads, simple machines etc. were fabricated by the participants. Interactive session on 'Machines around Us' was specially arranged for the students in Innovation Hub. A special session on 'Day Time Astronomy' was arranged for the students.

All the students were exposed to the exhibits in Science Park & various galleries (Fun Science, Water, Invention) and facilities of the Centre includes Planetarium, Science on Sphere, 3D film show etc. Interactive sessions on relevant themes were also organized. Science Demonstration Lectures on theme 'Fun at Low Temperature', 'Soap Bubbles' & 'Fun Science' were arranged. The students were also introduced to night sky through Sky Observation Programme. Participation Certificates were distributed at the culmination of each session. Smt Sonal Kamdi, Divisional Forest Officer, Field Director Office, Pench, Nagpur was prominently present on the occasion.

REGIONAL SCIENCE CENTRE, BHOPAL

Innovation Hub Programmes

Innovation Hub of the Centre organized 07 Orientation sessions, 01 Tod Fod Jod, 01 Creative Idea and 01 Kabad se Jugad on the topics such as Star Night Light Projector, Electric Iron, Search your Missing Things, Holi with Science Natural Indicators, Study of Blood, Chem Magic, StarLink Train, Sun Clock, Chloride Test of Water, during the month of March, 2024. A total of 40 Students participated in all these sessions.

Workshop cum Exposure Camp in collaboration with PRATHAM Education Foundation

The Centre, in collaboration with PRATHAM Education Foundation organized the second batch of the Hands-on Workshop-cum-Exposure Camps from 01.03.2024 and 02.03.2024 in its premises wherein a total of 42 under-privileged students participated. As a part of the programme, each participant developed 6 science-based kits i.e. Bird in Cage, Butterfly CG Kit, Stick CG Kit, Newton's Colour Disc kit, Magnetic Levitation kit and Lungs Model kit with all the raw materials and guidance supplied by this Centre. The completed kits, along with Certificates of Participation, were permanently given away to the participants for use at home. Apart from this, Guided Gallery tour, Taramandal Show, 3D Film Show, Dinosaur Park visit, Daytime Astronomy with Sunspots observation, Evening Sky watch, Super-cooled Bodies Show and Visit of Innovation Hub and Orientation programmes were also organized during the programme.

Celebration of International Women's Day

The Centre, celebrated International Women's Day on 08.03.2024, by organizing a series of programmes exclusively for women and girls students. As a part of the programme, a Workshop on Haematology (Study of Blood and Blood disorders) was conducted in which actual blood smear slides were prepared with proper stains and further studied under a microscope for visualization of different blood cells and determination of Blood Group and Clotting time period. Further, a Workshop on the topic 'Food Adulteration Determination Test' was also conducted in which simple physical and chemical tests were conducted to determine the impurities in common food-stuffs like Sugar, Haldi, Chilli powder etc. An Anti-superstition Demonstration based on chemical experiments was also conducted on the occasion. A total of 40 women and girls including students, parents, house-wives and under-privileged children participated in all these programmes. Certificates of Participation were awarded to all participants participating in the programme.

Celebration of World Water Day

The Centre, celebrated World Water Day on 22.03.2024 by conducting a series of programmes for school children and general public and inaugurating a series of gallery exhibits. As a part of the programme, a Science Play on the topic 'Save Water, Save Life' was organized in which 6 teams (including 4 under-privileged teams) comprising 36 students participated. An experimental based Workshop on 'My Water, My Test' was also conducted in which a total of 32 students participated. This was followed by a Science Quiz on the topic 'Water: The Elixir of Life with special emphasis on Water footprints and Water Conservation techniques' in which a total of 35 students participated. A short in-house documentary presentation on the topic 'I am a drop' was also presented by the RSC team on the occasion. Certificates of Participation were awarded to all the participants taking part in the programme. The climax of the celebration was reached with the inauguration of 7 renovated gallery exhibits. Dr P. Jagan, Scientist E and Regional Director, Central Pollution Control Board, Bhopal Chapter graced the occasion and inaugurated the series of exhibits. The exhibits were: Magic Tap, Breathing Square, Illusion with a Ring, Spinning Egg, Turning Face, Vortex and Delayed Hearing. Amongst these, two water-related exhibits, such as the 'Magic Tap' and the 'Vortex' were also unveiled. While the exhibit 'Magic Tap' depicts a basic physical property of water that gives its own characteristic transparency as an optical medium, the exhibit on 'Vortex' displays the basic physical principle how a twisting fluid, being governed by the concept of Centrifugal force and Conservation of Angular Momentum, gives rise to phenomenon of whirlpools in rivers and streams accounting for larger atmospheric turbulences like tornados and hurricanes. As understanding these phenomena will lead to our strategy to face and mitigate many of the water-related natural disasters faced by humanity, these exhibits are expected to prove highly useful and beneficial for the society at large. Since then, the exhibits were kept on display for the public.

Celebration of Vernal Equinox

The Centre, celebrated the Vernal Equinox in the Northern hemisphere on 20.03.2024 that marked the Sun's position on the Earth's equator in its apparent northward journey in the sky. As a part of the programme, measurement of the shadow length of a vertical Pole of a given height was taken at noon-time to give the Zenith Distance of the Sun from which the value for the local Latitude was calculated with a fair degree of accuracy. Similarly, another vertical staff of 12 angulas in height (nearly 21 cm) was employed to cast its shadow on the ground and, from it, the length of the noon-time equinoctial shadow or Pallava, was determined. Further, a staff was kept tilted from the vertical position by the local latitude angle to remain in line with the Sun at the local noon-time and, at this position of the staff, no shadow of the staff was observed on the ground. Apart from this, a telescopic observation of the sunspots through solar filters as the safe media was also organized for the visitors and general public.

Mobile Science Exhibition

The Centre, in collaboration with Rajya Shiksha Kendra Bhopal, organized Mobile Science Exhibition (MSE) on the topic "How Things Work" in the schools of the district of Dindori. Apart from the exhibition, SDL and Science Film shows were also conducted during the month. A total of 12 schools were covered during the month. The Centre, also organized Mobile Science Exhibition programme with its MSE unit entitled 'Energy' in the district of Narmadapuram

and covered a total of 5 schools during the month. Apart from the exhibition, SDL shows were also conducted. The Centre, also organized Mobile Science Exhibition programme with its MSE unit entitled 'Measurement ' in the district of Raisen and covered a total of 5 schools during the month.

GOA SCIENCE CENTRE AND PLANETARIUM, PANAJI

International Women's Day Celebration

The Centre celebrated International Women's Day By organizing following Workshops for Girls & Women:

- **Workshop on Determination of food adulteration**
The workshop was organized for girls and housewives on 07.03.2024. During the workshop the participants were enlightened to identify the common adulterants present in the edible food items using various physical and chemical test them. In total 22 women participated.
- **Workshop on Make Greeting Card using Paper Circuit**
The workshop was organized for girls and housewives on 08.03.2024. During the workshop the participants were introduced to basic electronics and were taught to make greeting card using LED's and paper circuit. In total 25 women participated.

Astro Night

The Centre organized an Astro Night at Miramar beach on 14.03.2024. During the program the tourists were allowed to explore the night sky by observing the moon & Planet Jupiter through the telescope. The tourists were also guided to identify various constellations. A total of 2840 visitors witnessed the event.

World Water Day Celebration

The Centre celebrated the World Water Day by organizing a spot quiz for the general public on 22.03.2024. In total 39 general public participated

DISTRICT SCIENCE CENTRE, DHARAMPUR

International Women's Day.

International Women's Day was celebrated at the Centre on 08.03.2024 on theme "Invest in Women: Accelerate Progress". The event was organized in collaboration with Deep Vicharak Charitable Trust, Baroliya and Samvadak Charitable Trust Dharampur, to celebrate women's achievements and to spread awareness about gender equality. Some of them shared their views & thoughts about women's sacrifices & also their achievements. In all total 56 women participated in the programme.

Outreach program

Centre deliver a talk on topic "Renewable energy source" and "Hygiene and Sanitation" on 11.03.2024 at PM Shri Bilpududi Primary School, Dharampur 70 Boys and 73 Girls participated in the Programme.

π Day Celebration

On 14.03.2024 π day celebration held at District Science Centre Dharampur. 86 students participate in the celebration. All the students and teachers participated in hands on activity like value of π.

Annual Science Quiz Competition

Centre Organized annual science quiz on 14.03.2024 & 15.03.2024 in collaboration with District Institute of Education & Training (DIET), Valsad. Where total 26 schools participated for the competition. Total 13 round quiz game were conducted. In all 120 students participated in the Quiz competition.

Fire Safety Demonstration.

Fire Safety Demonstration program was held at DSCD on 15.03.2024. Brief information was given to handle the different type of fire with help of Fire extinguisher. About 40 students & General visitors had watched the demonstration.

Water & Sanitation Management

One Day Training under The Jal Jivan Mission in collaboration with Water and Sanitation Organization (Wasmo) was held on 16.03.2024. Workshop on water management was organized for District Jal Samiti. "Mahila Pani Samiti Award and Shreshta Pani Samiti 2023-24" has been awarded by the District Pani Samiti. 40 people had attended this lecture.

Astro Night Tourism – Sky Observation Program

Astro Night Tourism Sky observation program was organized on 17.03.2024 at Parklands, GIDC, Vapi with Actipass Vapi. 80 students and parents participated in the programme. Moon, Jupiter and messier 42,45 were observed through telescope and others constellations and zodiac were identified during the programme.

Mobile Science Exhibition

Curriculum based Mobile Science Exhibition was organized by the Centre from 01.03.2024 to 28.03.2024. Total 16 school sites of Valsad District covered during the month.

MSE Tour

Hygiene & Sanitation based Mobile Science Exhibition was organized by the Centre from 01.03.2024 to 28.03.2024. Total 7 school sites of Valsad District covered during the month.

Bootcamp

Bootcamp was organised by government engineering college, valsad during infinium 2024 from 14.03.2024 and 15.03.2024. In which Jr. Mentor R. V. Shah was invited to deliver session on robotics to students and faculties. 600 students from 5 schools participated in the bootcamp.

Robotic event at Infinium 2024

Students of Innovation hub, DSCD participated in Robosoccer - a robotic event at Infinium 2024, organised by Government Engineering College, Valsad on 14.03.2024 and 15.03.2024. Team of Innovation Hub secured 2nd position in the event among 6 teams

Robotic event at Technixianze 2024

Students of Innovation Hub, DCSD participated in Robo Race - A robotic event at Technixianze 2024 organised by S.S. Agarwal College of Engineering and Technology on 15.03.2024 and 16.03.2024. Two teams from Innovation Hub participated in the event and secured both 1st and 2nd position.

X-X-X