

Monthly Descriptive Report of Programmes and Activities organized at Nehru Science Centre, Mumbai at its Satellite Units for the month of April, 2023

NEHRU SCIENCE CENTRE, MUMBAI

Amritkaal Video Series

The Centre as part of its ongoing World Science Facts video series has posted 03 films on the topic of What is Liquid Tree, Why do Ants walk in a line? and Is sun steady or fixed? These videos were posted on the Facebook and Instagram handles of the Centre on 07.04.2023, 11.04.2023 and 17.04.2023 respectively. The videos have been viewed by more than 2,150 times.

International Day of Human Space Flight

International Day of Human Space Flight was celebrated at the Centre on April 12, 2023 in collaboration with Russian Centre for Science and Culture in Mumbai. The programme started with homage to Cosmonaut Yuri Gagarin by the Chief Guest, His Excellency Mr. Aleksei V Surovtsev, the Consul General of Russia in Mumbai along with other 70 invitees by offering flowers. The Centre organised an online quiz, an open house quiz, and a Chalte Chalte Quiz on the theme 'Space Flight' to celebrate the event. 772 students took the online quiz, and 89 of them submitted their answers. The Open House and Chalte Chalte Quiz drew 162 people.

Inauguration of new attractions at Children Science Park

The Centre on 22.04.2023 inaugurated 03 new exhibits in the Children Science Park. The newly exhibits named Giant Lever, Perspective House & Praying Mantis were inaugurated by Dr. A. P. Jayaraman, Former Nuclear Scientist, BARC, Mumbai. 65 students, teacher and public were part of this inauguration.

World Earth Day

As part of the World Earth Day celebrations, the Centre hosted a Webinar on the theme Invest in Right Choices by Dr. Anuradha Gupta, Prithvi Innovations, Lucknow. Inaugurated 03 new exhibits in the Children's Science Park, held an online pledge on the topic of saving the earth, a science film show on climate change, an online quiz on investing in our planet, a science sphere show on The Unique Blue Planet and a Chalte Chalte Quiz. 645 people participated in this commemoration.

Vacation Creative Science Workshop

The Centre organized Vacation Creative Science Workshop from April to June 2023. The details of the programmes as per following:

- **Aeromodelling workshop on 14.04.2023**
An online workshop on the Aeromodelling was organized by the Centre. 30 students participated in this workshop in which students were made aware of the basic principles of flight through the paper models of Harrier, Dart plane and bat plane.
- **Kitchen Chemistry on 15.04.2023**
An online workshop on the theme Kitchen Chemistry was organised. During this session, 17 students participated in experiments on secret writing, diffusion, natural acid-base indicators, chemical volcanoes, and other topics.
- **Science Sparkle Workshop from 21.04.2023 to 23.04.2023**
Participants in this workshop learnt the fundamentals of science while making simple science toys. 20 students were part of this workshop.
- **Astrophotography Workshop from 29.04.2023 and 30.04.2023**
The sessions are being organized for 20 registered participants. Participants will learn the fundamentals of night photography. They will also be given hand-on experience on how to set a camera to click better night sky images.
- **Innovation Hub sessions from 08.04.2023 to 30.06.2023**
The Centre has started innovation hub session. Various session such as out-of-the-Box Thinking, improving thinking skills, Tod-Fod-Jod, Introduction to common traits of Innovators & 21st Century skills through wordmat and many other hands-on activities were organized for the members. 30 students have enrolled for Innovation Hub Sessions.
- **Soap bubble workshop on 29.04.2023**
To encourage the family learning, the Centre has announced soap bubble workshop for families on 29.4.2023. In this session, registered family members will have fun and will learn about

blowing bubbles of various sizes and forms. They will also learn about the science and Mathematics of the soap bubbles . 16 families have registered for the workshop

- **Science Ke Funday on 30.04.2023**

A programme titled "Science ke Funday" has been planned for registered families on April 30, 2023,. The schedule includes hands-on activities, a Liquid Nitrogen show, Science on a Sphere show, visit to the facilities of the Centre and guided tours to the galleries. 13 families have signed up for the initiative.

Experiment Skill Test on 22.04.2023

The Centre in collaboration with Bombay Association for Science Education (BASE) organized yet another programme of Experiment Skill Test for 20 registered participants of 8th to 12th std. at the Centre. In the test, students were given experiment set-up in which they were supposed to do experiments in the presence of experts from the Centre and BASE. Through this programme their skill for performing the experiment and keen observation was tested.

Popular Science Lecture on 29.04.2023

Dr. Anupam Guha, Faculty, IIT, Bombay is scheduled to give a popular science lecture on the topic 'Artificial Intelligence & its Current and Future Impact on Indian Society' at the Centre on April 29, 2023. The lecture will begin by outlining the fundamentals of artificial intelligence. Trending subjects such as Chat GPT, Dall-E, and Open AI will be discussed. The lecture will also cover techniques for mastering AI and include a few case studies. This lecture has 178 students enrolled.

Seminar for Start-ups

A seminar for giving guide lines to the start-ups is being organized at the Centre on 28.4.2023 in collaboration with Akhil Bharatiy Agarwal Sammelan. The experts from the various industries and Management field will guide students and participants of the seminar. Around 120 participants expected to take part in the seminar.

A similar workshop was also held on 15.03.2023. Around 182 people participated in the seminar.

RAMAN SCIENCE CENTRE, NAGPUR

Astro Night Tourism

The Centre in collaboration with Balasaheb Thakre Gorewada International Zoological park organized a special sky observation programme for the tourists visiting the Zoo on 01.04.2023 for this Astro Night Tourism event. In all 6 telescopes were arranged for observation. The programme received an overwhelming response from the visitors. About 4500 people observed the Moon, Venus and Mars along with prominent objects in the sky such as Orion Nebula, Alcor Mizar star pair etc.

International Day of Human Space Flight

International Day of Human Space Flight Day was celebrated by organising an online Quiz on the topic 'Human and Space' on 12.04.2023. 115 students from all over the country participated in the quiz. An Open House Quiz was also organised for the visitors of the Centre. Prizes were given away to the visitors who attempted the questions correctly. The audience for the Planetarium as well as SOS facility were briefed about the first human flight in space as a part of this event.

World Earth Day

World Earth Day was commemorated on 22.04.2023 at the Centre. To mark the event, Shri Shubham Chapekar, Education Officer, Balasaheb Thackeray Gorewada International Zoological Park Project, Gorewada delivered a lecture on the theme 'Invest in our Planet'. Sit & Draw contest on this year's theme was also organised. In which 61 high schools students participated.

Opening of Hall of Augmented Reality for public

The Hall of Augmented Reality was laid open to the visitors at the hands of Dr. Atul Vaidya, Director, CSIR - National Environmental Engineering Research Institute (NEERI) & Chairman, Local Advisory Committee (LAC) of the Centre on 28.04.2023. The Hall is sponsored by Mineral Exploration Corporation Limited (MECL), Nagpur under CSR Programme on the occasion of "50 Years of Dedicated Service Towards Mineral Security of The Nation".

Astro-Night Observation

The Centre in collaboration with Vigyan Bharati & Govt College of Engineering, Nagpur organised a Sky Observation Programme for school students from 25.04.2023 to 28.04.2023. The programme received an overwhelming response as 674 students and parents visited participated in the programme.

Vacation Creative Science Workshops

Vacation Creative Science Workshops were conducted in 6 disciplines at the Centre from 24.04.2023 to 29.04.2023. In all 6 batches were conducted in which 122 students participated & 811 kits were fabricated during the workshop. The details are as under: -

Discipline	Period	No. of Students	Titles of projects	No. of Projects	Total no. of Projects completed
Astronomy I	24.04.2023 to 29.04.2023	30	1. Sun Dial 2.Astrolabe 3.Sun Ball Projector 4.Telescope 5.Star Dial	5	150
Model Rocketry 1	24.04.2023 to 29.04.2023	30	1. Baloon Fan 2.Baloon driven Cart 3.Clinometer 4.Rocket stage I 5.Rocket Stage II	5	150
Aero modeling 1	24.04.2023 to 29.04.2023	13	1. Paper Glider 1 2.Roto-copter 3.Thermocol Glider I 4.Thermocol Glider II 5. Thermocol Glider III	5	65
Sci-Toy Making Workshop	24.04.2023 to 29.04.2023	21	1. Bird in a Cage 2. Sound Sandwich 3. Shimmering Bird 4. Newton's Disc 5. Climbing butterfly 6. Balancing bird, 7. Vibrating snake 8. Flying toy 9. Magnus Cups 10. Cartesian Diver 11.StaticEle. Butterfly 12.Constellation Viewer	12	252
3D Printing I	24.04.2023 to 29.04.2023	10	1. Introduction to 3-D printing 2.Different 3-D printing Processes 3.Introduction Tinker CAD 4. Creation of Digital Model of See Saw 5. Creation of digital Model of Roberval Balance	05	50
Creative Science I	24.04.2023 to 29.04.2023	18	1.Soap Making 2. Slime Ball 3. Electroplating 4.Crystal Garden 5.Flower Dissection 6. Onion Cell Observation 7. Coin Box 8. Kaleidoscope	8	144

REGIONAL SCIENCE CENTRE BHOPAL

Innovation Hub Programmes

Innovation Hub of the Centre organised 9 Orientation sessions on topics such Lego Controlled Car , Experiment with LEGO Kit , Bio Toilet, Science of Sound, Experiment On Free Falling Bodies, Probability-Chance and Likelihood, 3D Model Of Virus-I, 3D Model Of Virus-II, Fun With Centre of Mass. A total of 23 students participated in all these sessions.

Astro-Night Tourism at MPT Boat Club, Bhopal

The Centre in collaboration with Dept. of Tourism, Govt. of MP, organized the Astro- Night Tourism programme at the MPT Boat Club, Bhopal on 02.04.2023. A total of 4 telescopes of the Centre (CPC 8" Schmidt Cassegrain type – 1 no., Celestron 4" Refracting type - 2 nos., Zeiss Refracting type 3" - 1 no.) were used to show the prime celestial objects of the evening sky, i.e. Moon, Venus, Pleiades, M 42 Orion nebula. A total of 2200 plus highly enthusiastic visitors including students, parents, the general public and house-wives actively participated in the programme.

Innovation Festival

The Centre with support from MP Start Up Centre, Dept. of MSME, Govt. of MP, organized the Innovation Festival 2023 during 11.04.2023 to 13.04.2023 in its premises. The Festival was inaugurated by Shri Omprakash Sakhlecha, Hon'ble Minister, Dept. of Science & Technology and MSME, Govt. of MP in the presence of Prof Sunil Kumar, Vice-Chancellor, Rajiv Gandhi Proudyogiki Vishwavidyalaya (RGPV), Bhopal and Shri Umesh Kumar Rustagi, Director, Nehru Science Centre, Mumbai on 11.04.2023. A total of 60 participants from School, College and Grassroot categories displayed their models incorporating innovation and technologies during the Festival.

Besides this, three Popular Science Lectures, one interactive session and a Hands-on Workshop were also held during the Festival. The Popular Lecture on the topic 'Innovation: The way Forward' was delivered by Shri Umesh Kumar Rustagi, Director, Nehru Science Centre, Mumbai on 11.04.2023 which was attended by 255 participants. A Popular Science Lecture on 'Intellectual Property Rights (IPR)' was also organized on 11.04.2023 which was delivered by Dr. N. K. Choubey, Sr. Principal Scientist & Head, PIC, MPCST, Bhopal. This was attended by 255 participants. On 11.04.2023, an interactive session on Hands-on Innovative Teaching Methods was taken by Shri Umesh Kumar Rustagi, Director, NSC, Mumbai for MP Govt. Schools' teachers. This was attended by 40 MP Govt. School teachers. On 12.04.2023, a Hands-on Workshop on 'Innovative Methods in Science Experiments in Schools' was conducted by Shri Harish Parashar, Science Expert, DPI, Bhopal which was attended by nearly 50 participants. On 13.04.2023, Dr. Akhilesh Barve, Associate Prof, Dept. of Mechanical Engineering, MANIT, Bhopal delivered a Popular Lecture on the topic 'Start Up India' which was attended by 255 participants.

The Valedictory Function was held on 13.04.2023 which was graced by Smt. Rashmi Arun Shami, IAS, Dept. of School Education, Govt. of MP. Other dignitaries namely Prof Suresh Kumar Jain, Vice Chancellor, Barkatullah University, Bhopal, Dr. Shrikant B. Patil, Managing Director, CRISP India, Bhopal were also present on the occasion. The dignitaries felicitated the meritorious innovators of the Festival by presenting them prizes, trophies, mementos and certificates. A total of 2442 visitors (11.04.23: 1027 nos., 12.04.23: 775 nos. and 13.04.23: 640 nos.) visited the Innovation Festival during the three days.

Astro-Night Tourism at the Wind and Waves, Bhopal

The Centre in collaboration with Dept. of Tourism, Govt. of MP, organized the Astro-Night programme at the Wind and Waves lake side hotel on 18.04.2023 exclusively for the delegates of UNESCO Sub-Regional Conference on World Heritage. A total of 4 telescopes of the Centre (CPC 8" Schmidt Cassegrain type – 1 no., Celestron 4" Refracting type - 2 nos., Zeiss Refracting type 3" – 1 no.) were used to show the prime celestial objects of the evening sky such as Venus, Betelgeuse and M 42 Orion nebula. A total of 150 people participated in the programme.

Celebration of Earth Day

The Centre celebrated Earth Day on 22.04.2023 by organizing a series of events for school children. An Open House Oral Interactive Science Quiz on the topic 'Save Planet Earth' and a Slogan Drop Box competition on the theme 'Save Earth to Save Life' were conducted in which 45 students participated in each event. A Nature Film Show was also screened to mark the occasion. This was watched by around 55 viewers. Prizes and Certificates for the successful participants of the Science Quiz were given away on the spot on the completion of the programme.

Observance of Swachhta Pakhwada

The Centre observed the Swachhta Pakhwada in its premises from 16.04.2023 to 30.04.2023 by organizing a series of programmes for school students, staff members and the general public. As a part of the programme, a Swachhta Pledge was administered to all the staff members of the Centre on 18.04.2023 by Shri Saket Singh Kaurav, PC, RSC, Bhopal. From 19.04.2023 to 25.04.2023 Cleaning Drive of the Centre in respect of different indoor galleries and Science Park was carried out by the staff members of the Centre. A Slogan Drop box contest for general visitors and school children and a Painting contest for school children on the topic 'Clean India, Prosperous India' are scheduled to be conducted on 30.04.2023 by this Centre.

GOA SCIENCE CENTRE & PLANETARIUM, PANAJI

Computer Awareness Program

The Centre organized a computer awareness program for Senior citizens and general public from 03.04.2023 to 08.04.2023 from 3.00 p.m. to 5.00 p.m. During the program, the participants were taught MS Word, MS Excel, PowerPoint and Internet. In total 3 participants participated.

SCI-Birthday Celebration

The Centre initiated a new activity for interested individuals to celebrate their child's birthday in the Centre. A birthday was celebrated on 06.04.2023. During the celebration, the birthday guests were given a guided tour to the galleries, 3D show, Planetarium show, demonstration on Dry Ice and Sky observation program.

Swachhata Pakhwada 2023

The Centre organised the Swachhata Pakhwada from 16.04.2023 to 30.04.2023. During the fortnight, the staff carried out cleanliness drives in the premises of the Centre. The Swachhata Pledge was also vowed by the staff on 21.04.2023. As a part of the celebration, Popular Science Lecture on the topic 'Clean & Green Environment' was delivered by Mrs. Harshada Gauns, President, Arranya Environment Research Organization, Goa on 25.04.2023. In total 88 students attended the lecture.

Science Film Festival of India 2023

The Centre participated in the Science Film Festival of India organised by Vidnyan Parishad, Goa from 18.04.2023 to 20.04.2023 in ESG complex, Campal Goa. The programs organised during the three days is as follows:

- **Participation in the Science Expo**
The Centre participated in the Science Expo and exhibited table top exhibits explaining various science concepts. Science experiments on Air pressure and Vacuum, sound etc., were also demonstrated to the visitors. In total around 4236 students, teachers and general public visited the expo.
- **Science demonstration**
As a part of Students Science village, a science demonstration in physics was conducted for the students from rural areas of Goa. A Science activity on Sound was also carried out on this occasion. In total around 180 students & teachers participated.
- **Liquid Nitrogen Show**
During the valediction program of Students Science village, a liquid Nitrogen show was demonstrated for the students & teachers. In total around 350 students & teachers participated.

World Earth Day Celebration

The Centre celebrated World Earth Day on 22.04.2023 by organizing following programs:

- **Spot quiz**
A spot quiz on Planet Earth was organised for the general visitors at 12.00 noon. Total 76 visitors participated in the quiz.
- **Bird Nest Making Activity**
A Bird Nest Making Activity was organised for the school students from 3.00 pm to 5.00 pm. Total 16 students participated in this activity.

Vacation Creative Science Workshop

The Centre organised a Creative Science Workshop from 24.04.2023 to 28.04.2023 for the school students in the following categories:

- **Science Toy Making**
A Science toy making workshop was organised for the students of Class I to IV. During the workshop students made various toys using easily available materials. In total 23 students participated in this workshop.
- **Mathemagic**
A Mathemagic workshop was organised for the students of class V to VII. During the workshop students learnt to solve various concepts of mathematics in an easy way. In total 20 students participated in this workshop.

- **Robotics**

A Robotics workshop was organised for the students of class VIII to X. During the workshop students learnt to use LEGO kits and fabricated various bots. In total 12 students participated in this workshop.

Mobile Science Exhibition

The Centre organized Mobile Science Exhibition in Vidyaniketan Convent School, Kasal and Kalsulkar English School, Sawantwadi from 15.04.2023 to 18.04.2023. Apart from science exhibition, various other programs such as science demonstration, science film show, Science Games, Make & Take Science Toy making session and sky observation were organized in the schools. In total 793 students, teachers and general public visited the exhibition

DISTRICT SCIENCE CENTRE, DHARAMPUR

46th Foundation Day of NCSM

46th Foundation Day of NCSM was celebrated on 04.04.2023 at the Centre. To mark the event anti-superstition program, Fun at Low Temperature, liquid nitrogen show, and different physics and chemistry experiments & Demonstration was conducted. Apart from that, demonstration of growth of mushroom and Robotics was organized. Guided tour of Galleries was also organized. In all 60 student visitors participated in the programme.

Birth Anniversary of Dr. B.R Ambedkar

Birth anniversary of Dr. B.R Ambedkar was celebrated on 14.04.2023 at the Centre. A Documentary film on 'Life and work of Dr. B.R. Ambedkar' was shown to 40 visitors including students and public. Experiment on anti-superstition, different physics and chemistry experiments was performed during the event.

Earth Day celebration

Earth Day was celebrated on theme 'Invest in Our Planet' on 22.04.2023 at the Centre. Various activities like Open house quiz, Kabad se Jugaad, 3D printing workshop, identification of Medicinal plants, study of earth globe was organized by the Centre. Documentary film on Earth was watched by 57 students. Sky observation programme was organized during the event in which Moon, Venus, Mars were observed through telescope.

3D printing workshop

On 22.04.2023, Innovation Hub of the Centre organized one day workshop on 3D printing in Association with Bayer Vapi Pvt. Ltd. In which 10 Students participated. In the workshop students were taught about CAD-CAM and the working of 3D printer. Moreover, students were informed about the benefits and uses of 3D printer in Aerospace and Medical field. They used CAD software and printed the Design.

Participation in "INFINIUM" 2023 - a NATIONAL Level Techfest at Government Engineering College

Government Engineering College, Valsad organized "INFINIUM" 2023- a NATIONAL Level Techfest on 11.04.2023 & 12.04.2023. In which contestants from various colleges of Gujarat made their robots and participated in the competition. Also, the students' members of Innovation Hub of the Centre participated in Robo Race in which total 15 teams participated and out of that 5 teams were selected for the final round. In the final round, under the guidance of Innovation Hub Jr. Mentor, Shri Rahul Shah and their students Ronak Chauhan's team and Krishna Singh's team won the first and second positions in the Roborace competition. They designed the robot in the Innovation Hub itself and prepared wireless mobile operated WIFI robotic car using various sensors, motors and controller. The robot was controlled by server connected to mobile which was developed by the students. At last, they were grazed with winning prize and certificate.

Participation in 'Lakshya fest' at L.D. College of Engineering and Technology, Ahmedabad

Innovation Hub, DSC, Dharampur team won 1st position in 'Lakshya fest' held on 27.04.2023 to 29.04.2023 at L.D.College of Engineering and Technology, Ahmedabad in Robo Race. Total 7 teams participated from which Innovation Hub of DSC, Dharampur team were qualified for finals and won the competition.

Participation in Techfest at S.S. AGRAWAL College, Navsari

Innovation Hub, DSC, Dharampur team won both winner and runners up position in Techfest held on 18.04.2023 to 19.04.2023 at S.S. AGRAWAL College, Navsari in the Robo Race event of Robotics. Total 8 teams participated in Robo race and 4 team qualified for finals. From which 2 teams were of Innovation Hub and they were grazed with certificate and Cash prize.

Mobile Science Exhibition

Curriculum based Mobile Science Exhibition was organized by the Centre on 23.04.2023 at Shri Nalanda Gurukul Vidyapith, Surat. Fun at Low Temperature Liquid Nitrogen Show was conducted. 450 students and general visitors participated in the programme.

Anniversary Day Celebration

39th Anniversary Day of the Centre was celebrated on 27.04.2023 at the Centre by organizing various educational activities & programs during the celebration. Science show on Science and Miracle and Fun at Low Temperature, Liquid Nitrogen Show was conducted for the students. Moreover, program like guided tour & visit to Science Park, were also organized during the celebration. Total 50 students and visitors participated in the programme