Monthly Descriptive Report of programmes and activities organized at Nehru Science Centre, Mumbai and its Satellite Units for the month of December, 2023

### **NEHRU SCIENCE CENTRE, MUMBAI**

### Sci-Birthday Celebration

01 Sci-Birthday was organized during the month on 02.12.2023 for groups of 30 people respectively. The participants were taken around in the galleries, enjoyed 3D show and Motion Simulator Ride. Sessions on hands-on activity were also organized with demonstration on Liquid Nitrogen.

#### **Package Tour**

During this month, in all 52 (6,465 students) 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.

# **Outreach Programme**

• Reliance Foundation School, Nagothane, Raigad District. (01.12.2023)

Science Demonstration on Experimental physics, chemistry and a special Supercool Liquid nitrogen show was also organised for the school. A total of 02 shows were conducted separately for English and Marathi students. A total of 567 have witnessed the same.

## Dr. Antonio da Silva School, Dadar (05.12.2023)

The Centre on 05.12.2023 organized a Demonstration Matter at Low Temperature for 238 students of Dr. Antonio da Silva School, Dadar.

58th All India Marathi Science Conference at Navi Mumbai (09.12.2023 and 10.12.2023)

The Centre actively participated in the 58th All India Marathi Science Conference at Navi Mumbai on 09.12.2023 and 10.12.2023. A vibrant stall, catering to Navi Mumbai Municipal Corporation (NMMC) students and conference attendees, featured 05 engaging activities, including paper helicopter, Bird in a cage, caterpillar, dancing snake, and balancing joker. Additionally, liquid nitrogen displays and science demonstration shows were held on both days. The exhibition showcased 10 standalone science exhibits and attracted a total of 1,265 visitors, comprising students and general participants, fostering hands-on learning and scientific engagement.

## Aspee Vidyalaya, Palghar

The Centre on 19.12.2023 organized an impactful Liquid Nitrogen (LN2) demonstration at Aspee Vidyalaya in Uchat, Palghar District. The demonstration drew an audience of approximately 450 individuals. The engaging demonstration captivated attendees, offering them a firsthand glimpse into the wonders of LN2.

### Creative Science Workshop for Tribal Girls

The Centre empowered 468 girls from Kasturba Balika Vidhyalay, Gorthan, Palghar, and Kasturba Balika Vidhyalay, Waki, Vikramgad, Palghar, through a Creative Science Workshop, Science Demonstration, and a Sky Observation Program. Notably, these girls come from economically disadvantaged tribal families. The event conducted on 26.12.2023 was attended by 204 students and 4 teachers.

### **Annual Inter-School Quiz**

- Middle School Quarterfinals The Quarterfinals for Middle School were conducted from 05.12.2023 to 07.12.2023. The Annual Inter-School Quiz for the Middle School category witnessed the enthusiastic participation of 32 teams from various schools. The competition showcased the intellectual prowess of the students through rigorous and competitive rounds. From this keenly contested event, 8 exceptional teams emerged victorious, earning their place in the eagerly anticipated Semifinal round. The said rounds had the participation of 16 students.
- <u>High School Semifinals</u> The Quarterfinals for High School were conducted on 13.12.2023. The High School category continued the excitement as 8 formidable teams engaged in a battle of intellects during the Semifinal round. Each team showcased their comprehensive knowledge, strategic thinking, and quick reflexes. Following an enthralling competition, 4 standout teams secured their positions, marking their advancement to the pinnacle of the Annual Inter-School Quiz the Final round. The said rounds had the participation of 16 students.

#### **Innovation Hub Sessions**

The Innovation Hub on 16.12.2023 hosted engaging sessions on Microbiology and daytime astronomy for 16 students. These sessions delved into scientific domains, offering hands-on experiences and fostering curiosity and appreciation for scientific intricacies, inspiring future pursuits.

### **NGO Visit**

The Center hosted a visit by 114 girls from the Pukar Foundation. During their visit, the students were guided through diverse facilities and galleries within the Center.

#### **Aviation Day**

The Centre in collaboration with the Aeronautical Society of India, Mumbai Branch and Indian Women Pilots Association Organized Aviation Day on 09.12.2023 to commemorate Bharat Ratna Shri JRD Tata's first flight. 03 contests - Aviation Quiz, Essay and Elocution Contests were organized. The programme was physically conducted at the Centre this year just like previous year. Students were given welcome kit after registration.

#### Aviation Quiz

140 students from 38 schools all over Mumbai and surrounding regions registered for the preliminary elimination round of quiz. Top 05 teams were selected for the final verbal round which was conducted on the same day. The School of the Winning team was awarded the Boeing Rotating Shield. The best Girls team was given prizes and was awarded with Indian Women Pilots' Association (IWPA) trophy.

### • Elocution Contest

Elocution contest on 03 topics How will technology affect aviation in future – possibilities and concerns?, What are Greenfield airports? How do they protect environment? and Can Indian Civil Aviation navigate the challenges of Aviation growth was organized for participating school students. 41 students registered for the preliminary round of Elocution contest from which 05 students were selected for the final round. The Institute/ School of the winning participant was awarded Airbus Rotating Shield. Best Girl participant was awarded Indian Women Pilots' Association (IWPA) trophy.

### Essay Contest

Essay Contest on 03 topics namely How Data Science is used in Aviation, Glory of India's Space program and Remote controlled passenger flight – Myth or Reality. The Contest was organized for 24 registered students. The Institute/ School of the winning participant was awarded JRD TATA Memorial Trust Rotating Shield.

A total of 271 students, 50 teachers and 20 parents were present for the event. 20 members from AeSI-Mumbai, Indian Women's Pilot Association (IWPA) and a Team from Thakur Institute of Aviation Technology was also present at the event.

### **National Mathematics Day Celebration**

From 20.12.2023 to 22.12.2023 the Centre resonated with the jubilant celebration of National Mathematics Day. The event was a harmonious convergence of diverse activities, catering to various age groups and interests, fostering an immersive journey into the world of numbers and mathematical marvels.

## • Online Mathematics Quiz:

On 20.12.2023, an invigorating online quiz on Mathematics was hosted for 139 registered participants in an intellectually stimulating challenge. The quiz, accessible from 10 am onwards for students from Grade 6<sup>th</sup> to 9<sup>th</sup> invited enthusiasts to test their mathematical acumen.

### • Online Workshop for Teachers:

A specialized online workshop on Mathematics teaching aids was conducted on 21.12.2023 at 4:00 pm for 48 registered participants. This session aimed to equip teachers with innovative methodologies to make mathematics more accessible and enjoyable for students.

### • Mathematics Teaching Aid Contest:

A contest showcasing innovative teaching aids in Mathematics took place on 21.12.2023 at 11 am for 06 inspiring teachers to explore inventive ways of imparting mathematical concepts.

#### Mathematics through Origami:

Engaging students from 6th to 10th standard, the 'Mathematics through Origami' workshop unfolded an interactive session, merging creativity with mathematical principles. The workshop was conducted for 44 Registered participants under the guidance of 2 experts from Origami Mitra, Mumbai.

#### Math Ladder Challenge:

The Math Ladder Challenge, held on 21.12.2023 and 22.12.2023 from 10 am onwards, invited visitors to scale new heights by solving intriguing mathematical puzzles and challenges. 1,056 general visitors were part of this challenge.

#### • Exhibition on Fun with Mathematics:

Visitors on 22.12.2023 immersed themselves in an expansive exhibition, experiencing the joy and fascination of Mathematics through interactive displays and engaging exhibits. 1,600 Visitors were part of this exhibition.

# On-the-Spot Quiz:

On-the-Spot Quiz was organized from 20.12.2023 to 22.12.2023, challenging visitors' mathematical prowess with rapid-fire questions and mind-boggling challenges. 237 Number of visitors including students and general visitors were part of this quiz

#### • Mathematical Marvels: Facts Unleashed:

Throughout the event, fascinating mathematical facts were unveiled on the centre's social media handles, showcasing the awe-inspiring world of mathematical wonders. Till date the post was seen by about 4,632 of online visitors.

### Mobile Science Exhibition: Health and Hygiene

On special request an MSE was organized for the students of K.S.B. Patil Vidyalaya in Angar, Taluka: Mohol, District: Solapur, and the surrounding regions. The MSE attracted approximately 3,500 students and general public. The Mobile Science Exhibition covered 06 sites within the Solapur district during its tour.

### Mobile Science Exhibition: Curriculum Based

The Centre organized a Mobile Science Exhibition (MSE) 'Curriculum Based' at N. D. Marathe Madhyamik Vidyalay, Village: Shindhkeda, District: Dhule. Apart from the exhibition, Science Demonstration Lecture (SDL) & film shows were also organized during the visit. The MSE toured 06 sites of Dhule district.

# **Done making Workshop**

Organized on 24.12.2023 for students on Grade 6<sup>th</sup> to 10<sup>th</sup> a total of 25 students actively participated in our DIY Drone Making Workshop. The workshop not only provided them with theoretical knowledge but also allowed them to delve into the practical aspects of drone flying. Through this interactive session, students gained valuable insights into the basics of drone technology and discovered the fascinating world of aerial robotics.

#### **Experimental Skill Test**

The Centre, in collaboration with the Bombay Association for Science Education (BASE), will be coordinating a session of the Experiment Skill Test at the Centre on 30.12.2023. This program is designed for 14 registered participants from grades 8 to 12. During the test, the students will provided with experimental setups and will be 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 keen observational skills.

### Two Day Astronomy Workshop for Pratham Education Foundation (02 Groups)

### • 19.12.2023 & 20.12.2023 (Group I)

A total of 36 students participated in an astronomical exploration program. They began with breakfast and registration, delving into Astronomy fundamentals and hands-on Moon exploration. Discussions covered Moon Phases, Centrifugal force, and Spectroscopy. Cloudy skies unfortunately led to the cancellation of the Sky-Observation. The second day included Science on a Sphere, a 3D Show, Science Odyssey, and hands-on activities, concluding with Telescope handling, Rocket projectile activities, and an exploration of the Expansion of the Universe, followed by certificate distribution.

#### 22.12.2023 and 23.12.2023 (Group II)

A total of 23 students engaged in a full day dedicated to astronomical exploration. They started with breakfast, explored Science on a Sphere, 3D Science, and Science Odyssey Shows, visited galleries, and delved into celestial subjects like Constellations, the Sun, Moon Phases, Expansion of the Universe, and Spectroscopy through handson activities. The day ended with Telescope handling, a live observation of celestial objects, and certificate distribution before their departure., Jupiter, the Moon, and the Pleiades cluster. All the participants were given Certificate prior to their departure.

### RAMAN SCIENCE CENTRE AND PLANETARIUM, NAGPUR

# Activities and programmes during International Travelling Exhibition "Vaccines Injecting Hope"

To disseminate the message of the exhibition to larger masses, the Centre ran a social media campaign on our Facebook, X, and Instagram handles:

- Photos on visitors' experiences posted during the month.
- Daily matter regarding Indian innovations during Covid, historical & present view of scientists working in the field of vaccine development etc. was posted on social media.
- Daily Visitors' feedback stuck to 'Visitors Expression Point' were also posted during the month.
- 14102 students & teachers from 193 schools visited the exhibition & were guided by the demonstrators in the exhibition area including teachers (data till 28th Dec)
- 71120 visitors visited the exhibition including students (data till 28th Dec.).

### Activities and Programmes during Vaccines Injecting Hope Exhibition -

The Centre organized many activities and programme to mark the 'Vaccine Injecting Hope' Exhibition display at the Centre during December 2023:

- 26 nos. of Open House Quizzes on 'Vaccines' were conducted for 1035 students and 593 general visitors.
- Puppet Show on theme 'Vaccines Injecting Hope' 3 December 2023 in the Fun Science Gallery and in Auditorium for students and visitors. 470 audiences were present during 3 shows. The programme was conducted by professional agency M/s Babhulkar Arts, Amravati.

### **Microbiology Workshop**

Microbiology Workshop on the theme 'Exploring the world of microbes and superbugs' was organised for 40 College students on 4th December 2023. Dr. Pranita Gulhane, HoD Microbiology, Shivaji Science College, Nagpur conducted the workshop.

### Vaccine Awareness Rally

The Vaccine Awareness Rally was organised by the Centre for School and College students on 5th December 2023. 350 participants raised vaccine awareness slogans holding placards during the march.

#### **Panel Discussion**

A Panel Discussion on the theme 'Pandemics & Future' was organised on 6th December 2023 for school and college students. Dr Prashant Joshi, MD (General Medicine), M.Sc. (Clinical Epidemiology, Australia), Former Professor and Head, Dept of General Medicine, AIIMS, Nagpur & IGGMC, Nagpur, Dr Dilip Gore, Founder Director, Sai Bio-systems Private Ltd, Nagpur, Dr Shubhangi Warke, Asst. Professor & head, Veterinary Microbiology, MAFSU, Nagpur were among the panellists and Dr Pratima Gulhane, HoD, Microbiology, Shivaji Science College, Nagpur moderated the discussion. 145 college and school students attended the session.

#### **Skit Presentation**

Skit presentation by schools was organised in the exhibition area, Garden Area & Auditorium on 6th & 10th December 2023 at RSCN by New Apostolic School and Shri Niketan Vidyalaya, Nagpur. The programme received overwhelming response from school and college students. 699 students and general visitors were present to witness the Skit.

The activities, contests and programmes organised from 27 November - 7 December 2023 culminated on 7th December 2023 with a Popular Science Lecture delivered by Dr Pranita Gulhane, HoD, Microbiology, Shivaji Science College, Nagpur on the theme 'Vaccines Injecting Hope'. The lecture was followed by the Prize Distribution function. 136 students attended the function.

### **Glove Puppet Programme**

2 shows of Glove Puppet Programme for students and visitors by professional Institution 'Ranjan Kala Mandir) Nagpur on theme 'Vaccines Injecting Hope' was oragnised in the auditorium of the Centre on 15th December 2023. 350 students and general visitors took advantage of the Puppet Show.

### **Street Play**

A street play was organized on the theme 'Vaccines Injecting Hope' at Maharajbagh Zoo, Nagpur during the evening time on 17th December 2023. The members of professional group 'DevelpArtz' conducted the play for 325 people. (Outreach programme)

### Mobile Science Exhibition on 'Vaccines Injecting Hope'

The Exhibition was organized in Chandrapur and Wardha Districts from 29 November to 28 December 2023. In all 13 sites were covered during the tour for 25 days. 24404 students and teachers visited the exhibition. 14 No. of SDLs were also conducted for 8322 students.

#### MSE to Gondia District on 'Curriculum based Science'

The exhibition was organised at 13 sites during 29 November to 29th December 2023 (27 days) in Gondia District. 10814 students and teachers visited the exhibition. 9 No. of SDLs were conducted for 3690 students. 15 films were screened for 2444 students. 4 Sky Observation Programmes were conducted for 90 students.

### MSE to Bhandara District on Hygiene & Sanitation

The exhibition was organised at 13 sites during 29 November to 28th December 2023 (26 days) in Bhandara District. 10957 students and teachers visited the exhibition. 41 No. of SDLs were conducted for 3293 students. 48 films were screened for 3270 students. Also 1 sky observation programme was conducted for 30 students.

#### **Test Your Experimental Skills - Level 1**

6th Experimental Skill Test was conducted at Raman Science Centre and Planetarium, Nagpur in collaboration with Bombay Association of Science Education (BASE, Mumbai) on 24th December 2023. 14 students (Std 8 to 12) participated in the programme (17 registered). 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 as Examiners for the Test. The criteria was 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, the students who scored 75% and above marks were awarded certificates. 4 students got certificates of Level I.

### Vidushi - Women in STEM

RSC Nagpur is running a social media campaign "Vidushi: Women in STEM" to salute some of the early Indian women scientists. 3 such posts were shared on social media of the Centre every Wednesday i,e. on 6th, 13th, 28th December 2023. The campaign allows us to connect with our audience on a personal level, engaging them in meaningful

conversations about science, technology, and innovation. The original English script was replaced with Marathi translation to facilitate the visitors in Maharashtra.

### **Astronomy Camps**

3 Astronomy Camps were organised at RSC, Nagpur in collaboration with Pratham, an innovative learning Organization, Nagpur Chapter on 5th-6th December, 11th-12th December & 14th – 15th December 2023. 40 students associated with Pratham from remote areas of Katol-Narkhed Region, Mauda-Nagbhid Region & Ralegaon-Samudrapur Region were introduced to various facilities at Centre. Also they actively took part in various astronomy-related hands-on activities organised by the Centre. Students also participated in the Solar Observation & Sky Observation sessions. They were exposed to facilities, galleries and Science Park.

#### **Science Museum School**

Science Museum School Programme was organised at the Centre on 14th and 28th December 2023. Children were introduced to various angles in Geometry & learning fractions respectively. They were engaged in various hands-on activities related to measuring angles & fractions. 40 students from underprivileged school 'Maharashtra Adhyayan Mandir' were participated in the programme.

# 11th Science Expo & Innovation Festival – An interface of Science and Society

'Science Expo', a unique event to bridge the gap between science and society was organised at the Centre with collaborative efforts of Science & Technology institutions. The objective of the event is to act as an interface between science and society. 25 nos. of selected Innovative projects by innovators from schools, Science & Engineering colleges and Start-up will be on display during the innovation festival and will be explained to the visiting public. Following 15 scientific Institutions participated in the Science Expo: Anthropological Survey of India, Nagpur, Atomic Minerals Directorate for Exploration & Research, Nagpur, CSIR - National Environmental Engineering Research Institute, Nagpur, Geological Survey of India (Central Region), Nagpur, Government Medical College & Hospital, Nagpur, ICAR - Central Institute for Cotton Research, Nagpur, Indian Society of Heating, Refrigeration & Airconditioning Engineers, Nagpur, Jawaharlal Nehru Aluminium Research, Development & Design Centre, Nagpur, Mineral Exploration & Consultancy Limited Nagpur, Nuclear Power Corporation of India, Limited, Mumbai, Raman Science Centre & Planetarium, Nagpur, Regional Remote Sensing Centre (Central) Nagpur (ISRO), Soil and Land Use Survey of India, Nagpur, Serum Institute of India, Pvt. Ltd. Pune, Visveswaraya National Institute of Technology, Nagpur. 'Science Expo & Innovation Festival' was inaugurated on 19th December 2023 by Padmashri A. S. Kiran Kumar, Former Chairman, Indian Space Research Organisation (ISRO), and Former Secretary, Dept. of Space, Govt. of India, Dr. Subhash Chaudhari, Vice Chancellor, R. T. M. Nagpur University, Nagpur was guest of honour. The 'Science Expo' was open for the public every day during 19th - 23rd December 2023. 39367 students, teachers and general visitors took advantage of the Science Expo & Innovation Festival.

The valediction of the programme was organised on 23rd December 2023. Dr P.K. Gupta, Regional Director, Atomic Mineral Directorate for Exploration and Research, Nagpur was the Chief Guest. Representatives from all the Institutions shared their experience of the Expo on the occasion. The participants from all the scientific institutions and students participants of Innovation Fest were felicitated by the Chief Guest by offering mementos and certificates. 210 people attended the valedictory function.

### Popular Science Lecture Series during 11th Science Expo:

Date	Time	Name of the speaker & Institution	Topic of the Lecture	Audience
19.12.2023	11 am	Dr Kiran Kumar, Ex-Chairman ISRO	Astronomy n Space	390
20.12.2023	12.00 Noon	Dr. G. Sreenivasan General Manager, Scientist Engineer G ISRO-NRSC - Regional Remote Sensing Centre (Central), Nagpur	"Indian Space Science Societal Benefits and Opportunities"	139
	3.30 PM	Dr. S. Y. Bodkhe Chief Scientist, CHWMD National Environmental Engineering Research Institute, Nagpur	"Community Solid Waste Management for Sustainable Future"	110

Date	Time	Name of the speaker & Institution	Topic of the Lecture	Audience
21.12.2023	12.00 Noon	Dr. Mohmed Najar Principal Scientist, Jawaharlal Nehru Aluminum Research Development and Design Centre, Nagpur	"Aluminium in Daily Life and Beyond: Contemplation of Major Milestones"	132
	3.30 PM	Shri P. Ravindran General Manager, Mineral Exploration and Consultancy Limited Nagpur	"Overview of Mineral Exploration in India"	125
22.12.2023	12.00 Noon	Shri S. K. Jena General Manager Nuclear Power Corporation of India Ltd. Mumbai	"Nuclear Power – Clean, Green, and Safe"	131
	3.30 PM	Dr. Rajkumar Meshram Geoscientist, Director, Petrology Division, Geological Survey of India, Nagpur	"Gemstone: Its Identification – Natural v/s Synthetic and Uses"	122
23.12.2023	12.00 Noon	Dr. Abhisikta Ghosh-Roy Anthropologist, Anthropological Survey of India, Nagpur	"Understanding human through Anthropological lens"	127
	3.30 pm	Dr. Dilip Gore Director, Sai Biosystems Pvt. Ltd, Nagpur	"Innovation and Funding opportunities"	109

#### REGIONAL SCIENCE CENTRE, BHOPAL

#### **Innovation Hub Programmes**

Innovation Hub of the Centre organized 8 Orientation Sessions on topics such as Cell division, Inverse Law, The Origin and evolution of Life on the earth, Cycloid-Epicycloid and hypocycloid, Fun with Physics, Pedigree Tree and Trigonometric Function Calculator. A total of 35 students participated in these programmes. Apart from this, a total of 8 Exposure Visits were organized in which 362 visitors participated.

## Hands-on Astronomy Workshop in collaboration with PRATHAM Education Foundation

The Centre, in collaboration with PRATHAM Education Foundation, organized a series of 3 Hands-on Workshop-cum-Exposure Camps in collaboration with PRATHAM Education Foundation from December 5-6, 2023, December 7-8, 2023 and Dec 16-17, 2023 in its premises wherein a total of 45, 36 and 41 under-privileged students participated respectively. In each programme, each participant developed two astronomy-based kits i.e. Refracting Telescope (Magnification: 3x) and a Solar Eclipse Demonstration 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 and Visit of Innovation Hub and Orientation programmes were also organized during the programme.

#### **Celebration of National Mathematics Day**

National Mathematics Day is celebrated on December 22 every year in India to mark the birth anniversary of our great mathematician Srinivasa Ramanujan (1887- 1920) who contributed significantly to different fields of Pure Mathematics such as Number Theory, Mathematical Analysis, Infinite Series and Continued Fractions. Regional Science Centre, Bhopal celebrated National Mathematics Day by organising a series of programmes from Dec 22 to 23, 2023 for school children and the general public. As a part of the programme, a Public Talk on the topic 'The Vision of a Master: Ramanujan's Far-reaching Influence on Math and Beyond' was delivered by Dr. Ajit Bhand, Dept. of Mathematics, IISER, Bhopal at 11.00 P.M. on Dec 22, 2023. The Talk shed light on the life and works of the great Indian mathematician which was expected to inspire our younger generations copiously to develop a love and inclination towards mathematics and to imbibe in them a zeal to pursue mathematics in their future careers. A total of 400 school children listened to this Talk. A Science Film show featuring the life and works of the self-taught mathematician Srinivasa Ramanujan was also screened on the same day from 10.30. a.m. to 1.00 p.m. This was be followed by an Open House Quiz based on the content of the film amongst the audience present. A total of 75 school children participated in this programme. On Dec 23, 2023, two Hands-on Creative Math Workshops were conducted among school and college students separately on the topics 'Ramanujan's Magic Number' and 'Trigonometric Functions

Calculator' respectively in which the participants developed some mathematical kits with all the raw materials, guidance and support provided by this Centre. A total of 29 and 15 students from school and college level participated in these Workshops respectively. The completed projects, along with certificates of participation, were given away to all the participants of the Workshop upon the completion of the programme. All the meritorious competitors of the Quiz were felicitated with prizes and certificates.

# Astronomy programme 'Aaj Ki Shaam, Taron Ke Naam'

The Centre, organised a paid astronomy-based programme under the title 'Aaj Ki Shaam, Taron Ke Naam' on the evening of December 23, 2023. A total of 9 participants participated in the programme. Various programmes such as Interaction with Experts, Astronomy Simulation software, Make and Take Astronomy Workshop, Taramandal planetarium show, Night sky watch with telescope were conducted amongst participants. Light refreshments were also served to all the participants during the programme.

#### **Mobile Science Exhibition**

- The Centre, in collaboration with Rajya Shiksha Kendra, organised a Mobile Science Exhibition (MSE) on the topic "How Things Work" in the schools of the district of Mandla. Apart from the exhibition, SDL and Science Film shows are also being conducted during the month. A total of 18 schools were covered in the month of December.
- The Centre also organized Mobile Science Exhibition programmes with the MSE Unit entitled 'Energy' in the district
  of Narmadapuram. Apart from the exhibition, SDL shows are also being conducted during the month. A total of 10
  schools were covered in the month of December out of the scheduled 39 schools.
- The Centre also organized Mobile Science Exhibition programmes with the MSE Unit entitled 'Measurement' in the district of Raisen. Apart from the exhibition, SDL shows are also being conducted during the month. A total of 10 schools were covered in the month of December out of the scheduled 31 schools.

### **GOA SCIENCE CENTRE AND PLANETARIUM, PANAJI**

#### Young Scientist 2023 Exhibition

The Centre participated in the Young Scientist 2023 Exhibition organised at Shiroda Higher Secondary School, Shiroda from 1.12.2023 to 2.12.2023. During the exhibition table top exhibits and science demonstration on topics like air pressure, sound, light etc. were demonstrated to the visiting students, teachers and general public. Around 1334 students, teachers and general public visited.

### Film Festival

The Centre in collaboration with Goethe Institute, Max Muller Bhavan, New Delhi organised a science film festival for students from 1.12.2023 to 15.12.2023. According the age group, science films on Science, Environment and climate change were screened for the students in the auditorium of the Centre. In total around 861 students and teachers witnessed the screening.

# **National Energy Conservation Day**

The Centre in collaboration with State Designated Agency, Electricity Dept. Govt. of Goa celebrated the National Energy Conservation Day from 11.12.2023 to 14.12.2023 as follows:

- State Level Energy Conservation Quiz
  - The state level energy conservation quiz was conducted in two rounds. The written elimination round was conducted on 11.12.2023 where top 4 teams from among 20 teams were selected for the verbal round which was held on 13.12.2023. In total around 80 students and teachers were present.
- Painting Competition
  - The painting competition was organised by the Centre on 12.12.2023 for the students of class Vth to VIIth. The theme for the competition was 'Energy is life: Conserve It'. In total around 130 students participated
- Poster Designing Competition
  - The poster designing competition was organised by the Centre on 12.12.2023 for the students of class VIIIth to Xth. The theme for the competition was 'Save Energy for Sustainable future. In total around 145 students participated.
- Valediction & Prize Distribution
  - The Valediction & Prize distribution function was organised on 14.12.2023 at Menezez Braganza Hall, Panaji. During the function, the winners were awarded with prizes in the hands of Chief Guest Shri Aleixo Sequeira, Honourable Minister for Environment, Law & Judiciary, Captain of Ports and Legislative affairs, Govt. of Goa.

# **Inauguration of Upgraded Digital Planetarium**

The Centre inaugurated its upgraded Digital Planetarium on 20.12.2023. Dr. Pramod Sawant, Honourable Chief Minister of Goa was the chief Guest on this occasion. In total around 230 students, teachers and general public were present.

### **Inauguration of Exhibit Supplemented Reality**

The Centre inaugurated its new exhibit Supplemented Reality on 20.12.2023. Dr. Pramod Sawant, Honourable Chief Minister of Goa was the chief Guest on this occasion. In total around 180 students, teachers and general public were present.

### **Teachers Training Programme**

On the occasion of 22nd Anniversary, the Centre organised a Teacher Training Programme on 21.12.2023. Dr. H.M. Pednekar, Director, Konkan Geographers Association was the resource person for the workshop. Total 23 teachers participated in this workshop.

### **Experiment Skill Test**

The first level of certificate of Experimental Skills was organised on 24.12.2023. During the experimental skill test students were asked to perform two experiments for skill assessment. In total 10 students participated.

#### **DISTRICT SCIENCE CENTRE, DHARAMPUR**

### **Observance of World AIDS Day:**

World AIDS Day on theme "Let's Communities Lead" was observed in collaboration with Taluka Health Office, Dharampur on 01.12.2023. An expert lecture was conducted at Skill Development Centre, Karanjveri on the topic "AIDS related problems, its causes and symptoms and its prevention" on 1st December, 2023. The lecture was delivered by Dr. Lipsa, & Dr. Ronak, Medical Officer, PHC Kakadkuva and was organized by Innovation Hub, DSCD. A total of 103 students and teachers participated in the lecture.

#### **District Level Science Fair**

The Centre extended the support by providing Judges for evaluation of Science projects at High School District Level Science Fair was organized at Sarvoday High School, Segvi on 08.12.2023. Education Officer Shri Pragnesh D Rathod and Innovation Hub Jr. Mentor Shri Rahul Shah were involved in District Level Evaluation Committee and evaluated the projects.

### **District Level Science Fair (Primary Section)**

District Level Bal Vaigyanik Pradarshani was organized at the Centre in collaboration with GCERT, Gandhinagar District Institute of Education & Training Valsad, BRC Bhavan Dharampur, Jilla Panchayat Shikshan Samiti Valsad from 11<sup>th</sup> to 13<sup>th</sup> December, 2023. The exhibition, was inaugurated by Shri Arvindbhai Patel, Hon'ble MLA, Dharampur. 60 projects were displayed by students of Valsad district and 10633 students, teacher and general visitors visited the exhibition. "Curriculum based" Mobile Science Exhibition & "Hygiene and Sanitation" Mobile Science Exhibition were organsed during the event. Innovation Hub, of the Centre demonstrated projects on 3D Printer, Aeromodelling and Robotics. District Science Centre, Dharampur also organize Science Demonstration Lecture and Sky observation program during the exhibition. Education Officer, Shri Pragnesh D. Rathod, Innovation Hub Jr. Mentor Shri Rahul Shah & Jr. Mentor Gayatri Bist, were involved in District Level Evaluation Committee and evaluated the projects.

### Test your experimental skills

Innovation Hub, of the Centre, in collaboration with Bayer Vapi Pvt, Ltd., and BASE organized "Test Your Experimental Skills Level-1" on December 17, 2023. The students were given the experiments to perform and grade was given according to their performance skills. Total of 20 students participated in the experimental programme out of which 7 students qualified for the Level-2.

#### **Celebration of National Mathematics Day**

National Mathematics Day was celebrated on 22.12.2023 at the Centre by organizing various Hands-on activities on mathematics. In all 3346 students and general visitors participated in the programme.

#### **Zonal Level Science Fair**

Zonal Level Bal Vaigyanik Pradarshani was organized at the Centre in collaboration with GCERT, Gandhinagar, District Institute of Education & Training Valsad, DEO Office Valsad, Jilla Panchayat Shikshan Samiti Valsad from 22nd to 23rd December, 2023. Shri Umesh Kumar Rustagi, Director, Nehru Science Centre, Mumbai, inaugurated the exhibition in presence of Shri Arvindbhai Patel, Hon'ble MLA, Dharampur and other dignitaries. 72 projects were displayed by students of Valsad district and 10295 students, teacher and general visitors visited the exhibition. "Curriculum based" Mobile Science Exhibition & "Hygiene and Sanitation" Mobile Science Exhibition were also organsed during the event. Innovation Hub DSCD demonstrated projects on Aeromodelling and Robotics. District Science Centre, Dharampur also organize Science Demonstration Lecture and Sky observation program during the exhibition. Education Officer, Shri Pragnesh D. Rathod and Innovation Hub Jr. Mentor, Shri Rahul Shah & Jr. Mentor, Gayatri Bist, were involved in District Level Evaluation Committee and evaluated the projects.

### I.I.T. Bombay - Techfest, 2023-24

Innovation Hub, of the Centre participated an international Technical Festival conducted by IIT Bombay at Powai from 27th to 29th December, 2023. Three students participated in Roborace, RoboSumo and Robosoccer event.

"हिंदी कार्यशाला: उद्देश्य एवं हिंदी लेखन परिचय"

बि.औ.प्रौ.सं. कोलकाता, राष्ट्रीय विज्ञान संग्रहालय परिषद, संस्कृति मंत्रालय, भारत सरकार द्वारा दिनांक 27.12.2023 को "हिंदी कार्यशाला : उद्देश्य एवं हिंदी लेखन परिचय" का आयोजन ऑनलाइन माध्यम से किया गया। इस कार्यशाला का संचालन सुश्री मंजु शिरीन, उप निदेशक(सेवा निवृत्त), हिंदी शिक्षण योजना,भारत सरकार, राजभाषा विभाग कोलकाता द्वारा किया गया। इस कार्यशाला में जिला विज्ञान केंद्र धरमप्र के नामित अधिकारी एवं कर्मचारियों ने प्रतिभागिता की थी।

### **Mobile Science Exhibition**

Mobile Science Exhibition on "Hygiene and Sanitation" was organized by the Centre during the month of December 2023 in Valsad District. Total 9 sites were covered during the month.

# **Special Sky observation Programme & Anti Superstition Programme:**

Sky observation & Anti-superstition programme was conducted by District Science Centre, Dharampur at NSS Camp site Khatana organized by Vanraj College Dharampur. on December 16, 2023. In all 670 Students and Teachers, General Visitors observed the celestial objects like Moon, Jupiter, Saturn, through telescope.