

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

### NEHRU SCIENCE CENTRE, MUMBAI

#### Sci-Birthday

On 05.08.2023, 20.08.2023, 25.08.2023 & 26.08.2023 the Centre organized Sci-Birthday for a group of 30 each. The participants were taken around in the galleries, enjoyed 3D show, SOS show and Motion simulator ride. A session on hands-on activity was also organized with demonstration on Liquid Nitrogen.

#### Workshop on Making Plant-based Skin Care Products

A 03-day workshop titled 'Plant-Based Skin Care products for Homemakers!' was hosted by Nehru Science Centre in its campus from 18.08.2023 to 20.08.2023. The workshop promoted greener and healthier skin care practices. Aimed at homemakers, it encouraged eco-friendly beauty routines and community engagement. The workshop introduced participants to the world of natural skin care. Covering the basics of plant-based skin care, the event educated attendees about skin-friendly plants and their benefits. DIY recipes for cleansers, scrubs, masks, and more were shared, enabling personalized products. Sustainable packaging ideas were also highlighted. The workshop was attended by 19 homemakers.

#### Book Launch on 05.08.2023

The Centre hosted a book launch of "India Rising: Memoir of a Scientist" by Dr. R. Chidambaram, in collaboration with Dr. Suresh Gangotra, on 05.08.2023. The event was attended by esteemed figures including the Chairman and members of various committees. The memoir provides insights into Dr. R. Chidambaram's journey, aiming to inspire scientific curiosity and education. The event attended by 229 Visitors, promoted the value of scientific learning and innovation.

#### Science ke Fun-day on 06.08.2023

This event was organized at the Centre on 06.08.2023 to promote family engagement in science-related activities, creating a sense of wonder and enthusiasm for science. The event featured interactive exhibits, hands-on experiments, demonstrations, and all shows at the Centre, aiming to engage participants in educational and entertaining activities. 15 families (60 persons) participated in the event.

#### 77<sup>th</sup> Independence Day Celebration

The Centre celebrated India's 77<sup>th</sup> Independence Day with a series of engaging events and contests on 14<sup>th</sup> & 15<sup>th</sup> August 2023 that encapsulated the spirit of patriotism and knowledge. The initiative aimed to involve participants in a celebration that aligned with the values of freedom and creativity. List of event are as follows:

- **Pledge taking ceremony on 14.08.2023:**

A pledge taking ceremony was held at 11:00 a.m. in the Reception Area of the Centre. The event was organized to commemorate a sense of unity and patriotism among the participants. Later in the day, starting from 4:00 p.m., the Centre hosted cultural performances centered on a patriotic theme. The performances included heartwarming patriotic songs, eloquent poem recitations that resonated with the spirit of the occasion. The aim was to foster a sense of national pride and camaraderie among the officers and staff members of the Centre. About 55 Officers & staff members participated in both the ceremonies.

- **Tiranga March and Flag Hoisting Ceremony on 15.08.2023:**

The Centre organized a Tiranga March after the flag hoisting ceremony, fostering patriotism as participants marched with the national flag. The Centre's Officers' involvement demonstrated their commitment to education partnerships. The march symbolized unity, progress, and the essence of Independence Day. Notably, 70 students from Pranav Vidya Mandir High School participated in the event.

- **Online Tricolour Rangoli Contest:**

28 participants registered for this contest. This unique artistic expression allowed participants to showcase their creativity and pay homage to the national flag through colors and patterns.

- **Online Tiranga Quiz Contest:**

Testing their knowledge about the tricolour and its significance, this educational quiz enabled participants to delve deeper into the history and symbolism behind India's flag, promoting a sense of national pride and awareness. The Quiz was attended by 128 participants.

- **Online Selfie with Tiranga:**

A total of 52 participants captured their heartfelt connection to the tricolour flag through selfies, showcasing their enthusiasm for the nation. This interactive contest not only promoted participation but also inspired people to reflect on the values and ideals that the flag represents.

- **Open House Quiz:**

An Open House Quiz for the visitors of the Centre was organized. The quiz offered an opportunity for visitors to engage with intriguing scientific and historical questions, fostering a sense of curiosity and knowledge sharing. The allure of exciting prizes added an element of competition and motivation, encouraging participants to immerse themselves in the learning process. 187 participants were part of this Open house Quiz.

By commemorating the occasion through these engaging activities, the celebrations succeeded in promoting a sense of community, patriotism, and a thirst for knowledge among participants.

### **Hindi Workshop on 17.08.2023**

The Centre took a proactive initiative to enhance the effective use of Hindi among its officers and staff members. This effort was demonstrated through the organization of a workshop titled "कार्यालयीन हिन्दी प्रयोग की सामान्य त्रुटियाँ और उनका निवारण," which aimed to elevate the Hindi language proficiency of the participants. The workshop, held on 17.08.2023 in both online and offline formats, witnessed the active engagement of 32 online participants, including Units of NCSM, and 20 officers and staff members from the Centre. This notable event included the presence of Centre's Director as well. The workshop was conducted by Shri Vinod Sharma, Former Assistant Director, Rajbhasha Vibhag, Mumbai Branch. Shri Vinod Sharma addressed common errors observed in Hindi usage and offered practical solutions. The workshop significantly contributed to enhancing awareness and precision in employing the Hindi language effectively within the context of day-to-day work activities.

### **Soft Landing of Chandrayaan 3**

The Centre was a proud host to a momentous celebration that marked a significant achievement in the realm of space exploration – the successful lunar landing of Chandrayaan 3. The event, resonating with the spirit of scientific curiosity and national pride, captivated the minds of around 600 eager participants who gathered to witness this historic moment at the Auditorium of the Centre on 23.08.2023. Following educational activities were organized at the NSCM to celebrate the event:

- **Making Paper Model of Chandrayaan 3:**

NSCM organized hands-on activity for making Paper Model of Chandrayaan 3 – the lander and the Rover. Prof Anish Gawande, Department of Zoology, Wilson College, Mumbai was the resource to guide the students. Shri Anish Gawande is also MyNEP ambassador for National Education Policy 2020. The students were provided with the templates and other required material for building the model. While building the model they were also explained about the different components that are being used in Chandrayaan 3 and their functions. They were also made aware about the objectives of such missions. 56 students from different schools participated in the activity.

- **Science on a Sphere show:**

Special shows on Moon and its mission were organized for the public and for school students on 23.08.2023. SOS slides explaining the various interesting features of the Moon and the information related to previous missions was shared with the visitors. 05 shows were organized during the day in which 452 visitors participated.

- **Popular Science Lecture cum Interaction session with Prof. M N Vahia, Former Scientist, TIFR:**

The Centre on 23.08.2023 had a privileged opportunity to host a captivating popular science lecture by the esteemed Prof. M. N Vahia, a former scientist at TIFR Mumbai just before the live telecast of soft landing of Chandrayaan 3. The lecture was delivered with meticulous expertise, providing attendees with profound insights that deepened their understanding of the significance of Chandrayaan 3's lunar landing and the broader context of space exploration. Prof. Vahia's presentation delved into various aspects of upcoming ISRO missions, offering attendees a comprehensive glimpse into the organization's ambitious plans for the future. With a detailed PowerPoint lecture, he masterfully conveyed the intricate details of ISRO's technological advancements. The lecture commenced with an overview of Chandrayaan's past missions, highlighting their accomplishments and the knowledge garnered from these endeavors. Prof. Vahia's expertise shone as he navigated through the complexities of ISRO's missions, breaking down the technology employed and shedding light on the innovative solutions developed to overcome challenges. Addressing the difficulties faced in space missions, Prof. Vahia highlighted ISRO's remarkable problem-solving capabilities. He shared instances of challenges faced during various missions and provided insights into how ISRO's team of dedicated scientists and engineers overcame these obstacles through innovative thinking and collaborative efforts. The lecture was attended by more than 476 attendees. The programme was streamed on the Facebook page of the Centre. The Facebook reach is 8,799.

- **Live telecast of soft landing of Chandrayaan 3:**

The highlight of the event was a live telecast straight from ISRO's Mission Control Room that captured the precise instant when Chandrayaan 3 made its remarkable touchdown on the lunar surface. The telecast was streamed in the auditorium as well as on the Centre's YouTube channel. Due to the overwhelming response we had to make additional screening arrangements outside the auditorium. Around 630 people were present at the Centre to witness the historical moment of soft landing of the Chandrayaan 3. The air was charged with anticipation as attendees, ranging from students to enthusiasts, held their collective breaths, their eyes glued to the screen displaying this breathtaking feat of engineering and innovation. All were excited and all started spontaneously with the slogans to celebrate the soft landing. The audience included people from all strata and all ages, students, parents, professionals, Police officials with their family members.

### **Experimental Skill Test on 26.08.2023**

The Centre, in collaboration with the Bombay Association for Science Education (BASE), coordinated a session of the Experiment Skill Test at the Centre on 26.08.2023. This program was designed for 09 participants registered from grades 8 through 12. 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 was to evaluate the participants' ability to perform experiments and demonstrate their keen observational skills.

### **Mobile Science Exhibition: Health and Hygiene**

The Centre organized a Mobile Science Exhibition (MSE) 'Health and Hygiene' in the govt. schools of Pune district. Apart from the exhibition, Science Demonstration Lecture (SDL) & film shows were also organized during the month. The bus has covered 16 sites during the month till now.

### **Mobile Science Exhibition: Curriculum Based**

The Centre organized a Mobile Science Exhibition (MSE) 'Curriculum Based' in the govt. schools of Pimpri Chinchwad district. Apart from the exhibition, Science Demonstration Lecture (SDL), Rotocopter Workshops & film shows were also organized during the month. The bus has covered 15 sites till now.

## **RAMAN SCIENCE CENTRE AND PLANETRIUM, NAGPUR**

### **International Travelling Exhibition "Vaccines Injecting Hope" inaugurated at the Centre**

The "Vaccines Injecting Hope" exhibition was inaugurated on 05.08.2023, at Raman Science Centre & Planetarium, Nagpur. Dr. Raj Gajbhiye, Dean of Government Medical College and Hospital, Nagpur, inaugurated the event. Notable attendees included Dr. Atul Vaidya, Director of CSIR–National Environmental Engineering Research Institute, Nagpur, Shri. A. D. Choudhury, Director General of National Council of Science Museums (NCSM), and Shri Samarendra Kumar, Deputy Director General of NCSM. Ms. Helen Jones, Director of Global Engagement and Strategy at Science Museum Group, London, was virtually present. The exhibition will run until 31.12.2023. The event received media coverage and was attended by 140 students and teachers.

The exhibition was a collaborative effort between NCSM, Science Museum London, and support from various organizations including Wellcome, UK, ICMR, India, NIV, Pune, Serum Institute of India, CSIR, AIIMS, NIBMG, Kalyani, and others. A Mobile Science Exhibition (MSE) themed "Vaccines Injecting Hope" was launched to spread awareness about vaccination in rural and urban areas.

To reach a wider audience, RSCN conducted a social media campaign on Facebook, Twitter, and Instagram. Vaccine-related information was shared, including visitor experiences and feedback. The exhibition attracted 29,276 visitors who were guided by demonstrators. Additionally, 3,517 students from 32 schools in Nagpur visited the exhibition, along with 447 students and teachers from 32 institutions for specially-abled individuals between 21.08.2023 and 30.08.2023.

The event also featured a Popular Science Lecture Series as part of the "Vaccine Injecting Hope" exhibition.

Overall, the exhibition successfully disseminated information about vaccines and their significance through a combination of physical and digital outreach methods.

### **Popular Science Lecture Series during 'Vaccine Injecting Hope' Exhibition**

As part of the monthly lecture series, the first lecture was given by Dr. Pragya Yadav, Scientist & Head of BSL 04 Lab at CSIR - NIV, Pune, on 25.08.2023, at Raman Science Centre & Planetarium, Nagpur. The lecture topic was 'Covid 19 - A turning point in vaccination efforts'. Dr. Yadav, known as the 'Vaccine Woman of India' for her role in developing India's indigenous vaccine 'Covaxin', engaged with 140 students from 25 schools in Nagpur and its vicinity. The event garnered positive press and e-media coverage, leaving students inspired.

To further engage the community, a street play centered around the theme 'Vaccines Injecting Hope' took place at NMC Gandhi Sagar Park on the morning of 28.08.2023. The play was conducted by the professional group

'DevelpArtz' and was attended by 120 individuals. This initiative served as an outreach program to spread awareness about vaccines and their importance.

These events successfully contributed to the dissemination of vaccine-related information and generated enthusiasm among both students and the wider public.

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

The Exhibition was organised in the schools of Nagpur city and Nagpur Districts. To date the exhibition was arranged at 05 sites and for 10 days. 4,821 visitors visited the exhibition. 02 SDLs were conducted for the students.

#### **Mobile Science Exhibition on 'Science in Syllabus' @ Yawatmal District**

The Exhibition was organised in the schools of Yawatmal District. To date the exhibition was arranged at 13 sites and for 26 days. 15,988 visitors visited the exhibition. 10 SDL's & 07 film shows were arranged for 5,676 & 3,655 students.

#### **Mobile Science Exhibition on 'Hygiene & Sanitation' @ Wardha District**

The Exhibition was organised in the schools of Wardha District. To date the exhibition was arranged at 13 sites and for 26 days. 16,136 visitors visited the exhibition. 10 SDL's & 7 film shows were arranged for 11,151 & 3,554 students.

#### **Monsoon Package Tour**

In all 27 monsoon package tours were organized for about 3872 students and teachers from 01.08.2023 to 29.08.2023. They were given a guided tour of the galleries, Planetarium show, film show on their syllabus and SDL on theme 'Colourful chemistry', 'Fun at low temperature' and 'Fun with physics'.

#### **Vidushi - Women in STEM**

The Centre has taken the initiative of 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 09.08.2023, 16.08.2023 and 24.08.2023. 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.

#### **Science Museum School**

The Centre has launched Science Museum School Program for this year from 22.08.2023. 40 underprivileged students of class 5th from Maharashtra Adhayanmandir School have attended the session on 'Solar System', a part of their syllabus. They will visit our Centre every Tuesday throughout this academic year to learn science in the syllabus. The project is supported by the Nishchay Foundation. A similar programme was also organised on 29.08.2023. A special planetarium programme was arranged for the students.

#### **Chandrayaan-3 Mission Soft-landing**

A Popular Science Lecture was organised on 23.08.2023 to mark the landing of Vikram Lander on the lunar surface. The lecture was delivered by Dr G Srinivasan, Scientist, RRSC (ISRO), Nagpur on the theme 'Chandrayaan3 Mission'. 125 students were present on the occasion. The programme was followed by a special Science on Sphere (SOS) show on 'The Moon'. A demonstration of a Pragyan Rover (replica) prepared by the Centre was arranged for the students and visitors during all the SOS shows. A live telecast of Vikram Lander's landing was screened for an enthusiastic audience during evening time. The programme culminated with the successful landing of the rover on the lunar surface.

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

3rd Experimental Skill Test was conducted today at Raman Science Centre and Planetarium, Nagpur in collaboration with Bombay Association of Science Education. 18 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 as Examiners for 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, the students who scored 75% and above marks got Certificate. 02 students were eligible to get the certificate.

#### **Workshop on 'Active Learning in Chemistry' at NEERI, Nagpur (Outreach programme)**

A workshop on 'Active learning in Chemistry through fascinating experiments' was organised by Raman Science Centre and Planetarium, Nagpur at NEERI through their 'Jigyasa Programme' on 28.08.2023. The workshop was attended by 55 Zilla Parishad Teachers from all over Maharashtra.



### **Saturn Observation Program**

The lord of rings 'Saturn' being located directly opposite of the Sun – at opposition – on 27.08.2023, as the Earth orbits between the two, a special sky observation programme was organised for visitors. In all 31 people took advantage of the programme.

## **REGIONAL SCIENCE CENTRE, BHOPAL**

### **Innovation Hub Programmes**

The Centre in its Innovation Hub organized 16 Orientation Sessions on topics such as Turbidity, pH and microbial growth in Water, Biological Classification, Topology, Central Dogma, Codon Cycle, Oersted Experiment, DNA Origami, Wave nature of light, Magical Chemistry, Light and Matter Interaction, Natural Bee Wax, Robotics, Agarose Gel Electrophoresis etc. A total of 96 students participated in these programmes.

Celebration of 'Meri Mati, Mera Desh', Har Ghar Tiranga and Independence Day

The Centre celebrated the 'Meri Mati, Mera Desh', Har Ghar Tiranga and 77th Independence Day programme from 09.08.2023 to 15.08.2023 by organizing a number of activities for school children. As a part of the programme, the Meri Mati, Mera Desh pledge was administered to all the staff members of the Centre Bhopal on 12.08.2023 by Shri Saket Singh Kaurav, PC, RSC, Bhopal. On 13.08.2023, a Slogan Drop Box programme on the topic 'Meri Mati, Mera Desh' was organized among general visitors of the Centre in which 30 visitors participated. On 14.08.2023, a Plantation programme with salutation to Meri Mati was organized inside the premises of the Centre with all the staff members of the Centre. The programme culminated on August 15, 2023 with a Painting Contest on the theme 'India's Achievement in Science & Technology Since Independence' organized among school children in which a total of 147 students participated. Apart from this, visit of Under-privileged students and a Liquid Nitrogen show were also organized on 14.08.2023 and 15.08.2023 respectively to mark the occasion.

### **Celebration Of The Soft-Landing Of Chandrayaan-3: Online Lecture**

As a prelude to the Soft-landing of Chandrayaan-3 on the Moon, Regional Science Centre, Bhopal organized a Popular Science Lecture on hybrid mode on 21.08.2023 which was delivered by Prof Anil Bharadwaj, Director, Physical Research Laboratory (PRL), Ahmedabad on the topic 'Indian Moon Mission Chandrayaan-3' on online mode. The whole programme was telecast live in the auditorium of the Centre using a large screen projection for the benefit of local visitors. A total of 340 visitors, predominantly students from different local schools and colleges, watched the programme live using the facilities provided by the Centre. The programme was also streamed live in the official YouTube channel of the Centre for wide dissemination of the mission objectives and goal. A total of 542 visitors watched the programme on the online platform of the Centre. Shri Saket Singh Kaurav, PC, of the Centre initiated and moderated the discussion.

### **Teachers' Training Programme In Collaboration With Tribal Affairs Dept., Govt. Of Mp (Phase-I)**

The Centre in collaboration with Tribal Affairs Dept of Govt. of MP, organized the First batch of the Teachers' Training Programme (TTP) from 21.08.2023 to 25.08.2023. A total of 23 teachers from different schools under the purview of the Tribal Affairs Dept, participated in the programme. At the outset, Shri Saket Singh Kaurav, PC, of the Centre deliberated on the objectives of the programme and emphasized on the need of activity based and inclusive teaching and learning sessions in schools for effective class-room science education.

As a part of the programme, each participant developed four curriculum-based kits on the topic Pressure of a Liquid at Rest, Magnetic Field of a Current Carrying Solenoid, Model of Carbon Atom and Value of Pi with the raw materials, guidance and support provided from this Centre and, hence, a total of 92 kits were developed. Further, a Popular Science Lecture on the topic 'Practical Astronomy' was delivered by Shri Alok Mandavgane, Joint Secretary, Aryabhat Foundation, Bhopal to the participants on 22.08.2023. A total of 21 participants listened to the lecture. In addition to this, an Interactive Session on 'Joy of Science Experiments at School Level' was conducted by Shri Harish Parashar, Science Expert, Directorate of Public Instruction (DPI), Bhopal. This was supplemented by 4 Hands-on Workshop sessions by Shri Manish Yadav, National Awardee Teacher at Junior level, Aurrai on topics Mechanics, Heat and Thermodynamics, Electro-magnetism and Optics.

Apart from this, Technology Oriented Session on 'Robotics & Virtual Reality', Liquid Nitrogen Show, Guided Gallery Tour, Taramandal planetarium Show, Orientation Session and Exposure Visit to the Highly Equipped Innovation Hub of the Centre etc were also conducted during the programme. All the fabricated kits, along with Certificates of participation, were given away to the participants on the completion of the programme.

### **Hands-On Science Demonstration Workshop Exclusively For School Teachers**

The Centre organised a hands-on Science Demonstration Workshop exclusively for the school teachers on 26.08.2023. The session was delivered by Shri Manish Yadav, National Awardee Teacher at Junior level, Aurrai amongst the august gathering of 190 teachers & students. In the workshop, Shri Manish explained the various concepts of Physics in a very engaging and effective manner.

### **Teachers' Training Programme In Collaboration With Tribal Affairs Dept., Govt. Of Mp (Phase-II)**

The Centre in collaboration with Tribal Affairs Dept of Govt. of MP, organized the Second batch of the Teachers' Training Programme (TTP) from 28.08.2023 to 01.09.2023. A total of 55 teachers from different schools under the purview of the Tribal Affairs Dept. of Govt. of MP participated in the programme. At the outset, Shri Saket Singh Kaurav, PC, of the Centre deliberated on the objectives of the programme and emphasized on the need of activity based and inclusive teaching and learning sessions in schools for effective class-room science education.

As a part of the programme, 4 Hands-on Workshop sessions was conducted by Shri Manish Yadav, National Awardee Teacher at Junior level, Aurrai on topics Mechanics, Heat and Thermodynamics, Electro-magnetism and Optics with the participating teachers. Shri Manish Kumar also delivered a Popular Lecture for the benefit of the teacher participants on the topic ' Story of A Bulb' on 28.08.2023.

This will be followed by two days of Hands-on Model Making Workshop sessions in which each participant will develop four curriculum-based kits on the topic Pressure of a Liquid at Rest, Magnetic Field of a Current Carrying Solenoid, Model of Carbon Atom and Value of Pi with the raw materials, guidance and support provided from this Centre and, hence, a total of 180 kits will be developed. Further, a Popular Science Lecture on the topic 'Practical Astronomy' was delivered by Shri Alok Mandavgane, Joint Secretary, Aryabhat Foundation, Bhopal to the participants on 30.08.2023. A total of 55 participants listened to the lecture.

In addition to this, a Popular Science Lecture on the topic 'A Peep into the Telescope' is scheduled to be delivered by Shri Samir Dhurde, Scientific Officer, Public Outreach Division, IUCAA, Pune to the participants on 31.08.2023.

Apart from this, Technology Oriented Session on 'Robotics & Virtual Reality', Liquid Nitrogen Show, Guided Gallery Tour, Taramandal planetarium Show, Orientation Session and Exposure Visit to the Highly Equipped Innovation Hub of the Centre etc., will also be conducted during the programme.

All the fabricated kits, along with Certificates of participation, will be given away to the participants on the completion of the programme on 01.09.2023.

### **Live Telecast Of Soft-Landing Of Chandrayaan-3**

As a part of the celebration of Soft-landing of Chandrayaan-3 on the Moon, RSC, Bhopal organized a special programme to live-telecast the momentous event to the general visitors. As a part of the programme, the live proceedings of the soft-landing process was telecast from the ISRO site and displayed for mass viewing using a large projection screen in the auditorium of the Centre for facilitating a large number of people taking advantage of the programme. A total of 372 people comprising students, parents, housewives and general public thronged the Centre to have a peep into this rare occasion. Shri Saket Singh Kaurav, PC, of the Centre anchored the whole programme and provided his expert level inputs for clarifying the visitors queries and interpretation of the technical complexities of the occasion as the event unfolded. Apart from this, regular gallery demonstrations with the scale-down model of Chandrayaan-3 have also been organized since the launch of the spacecraft on 14.08.2023.

### **Mobile Science Exhibition**

The Centre in collaboration with Rajya Shiksha Kendra, organised Mobile Science Exhibition (MSE) on the topic "How Things Work" in the schools of the district of Seoni. Apart from the exhibition, SDL and Science Film shows are also being conducted during the month.

## **GOA SCIENCE CENTRE, PANAJI**

### **Outreach Activity- Science Demonstration Lectures**

As an outreach activity science demonstration lectures on the topics Dry Ice show, Fun with chemistry and science magic show were conducted in Don Bosco High School, Panaji on 04.08.2023, 06.08.2023 and 07.08.2023. In total around 1200 students and teachers were present.

### **Zero Shadow day**

The Centre observed Zero Shadow Day on 11.08.2023 by making special arrangement to see the rare phenomena of zero shadow to the public visiting the centre. Around 73 students, teachers and general public witness and participated in the activities conducted related to zero shadow day.

### **Commemoration of International Year of Millets**

To commemorate international year of millets the Centre organised following programs:

- **Workshop for teachers:**  
A workshop on the topic 'Shree Anna: role of millets in global nutritional security, climate adaption, health and prosperity' was conducted by Dr. Parveen Kumar, Director, ICAR-Central Coastal Agricultural Research Institute, Goa on 14.08.2023 for the school and higher secondary teachers. In total around 213 teachers participated in this workshop.
- **Inauguration of Exhibition 'Millets for Health':**  
A sample exhibition titled 'Millets for Health' was inaugurated on 14.08.2023 by Dr. Parveen Kumar, Director, ICAR-Central Coastal Agricultural Research Institute, Goa. In total around 6359 students, teachers and general public visited the exhibition.
- **Popular Science lecture on 'Millets for healthy life':**  
The Centre organized a popular science lecture on the topic 'Millets for healthy life' on 16.08.2023. The lecture was delivered by Dr. Monica Suresh Singh, Scientist, ICAR-Central Coastal Agricultural Research Institute, Goa. In total around 348 students & teachers attended
- **PSL on 'Importance of millets cultivation to achieve food and nutritional security:**  
The Centre organized a popular science lecture on the topic 'Millets for healthy life' on 17.08.2023. The lecture was delivered by Dr. Paramesha V, Scientist, ICAR-Central Coastal Agricultural Research Institute, Goa. In total around 221 students & teachers attended
- **Workshop on How to make healthy & delicious millet based recipes:**  
The Centre in collaboration with Siddha Clinical Research Unit, CCRS, Ministry of Ayush, Govt. of India will be organizing an workshop on how to make healthy and delicious millet based recipes for teachers and general public on 31st August 2023. Around 150 audience are expected to participate in the workshop.

### **Independence Day Celebration**

The Centre celebrated the 77th Independence Day by organizing following program:

- **Flag Hoisting Ceremony:**  
The Indian flag was hoisted on 15.08.2023 by Shri Vilas D. Chaudhari, Project Coordinator, Goa Science Centre. Other staff members and general public were also present during this occasion.
- **Tiranga March:**  
The staff and their family members walked around the Centre with the Indian Flag on 15.08.2023
- **Spot Quiz:**  
A spot quiz on Indian Flag was organised for the general public visiting the centre on 15.08.2023. In total around 73 visitors participated in the quiz.

### **Launching of Rocket Model in the Science Park**

The Centre installed a Scale down Rocket Model LVM3- M4 which carried Chandrayaan 3 in Science the park of the centre on 15.08.2023. The model was inaugurated by Brig Arvinder Singh Sawhney, Commandant, 2 signal Training Centre & Station Commander, Military Station Goa.

### **Environmental quiz**

The centre in collaboration with Students of Sustainability organized an Environment Quiz for the school students. The written elimination round was held in the auditorium of the centre on 21.08.2023 in which total 76 teams from all over Goa participated. Further as a part of the quiz two semifinal rounds and the final round was held on 26.08.2023 after which prizes and certificates were awarded to the winners.

### **Panel Discussion**

The Centre in collaboration with students for sustainability organizes a panel discussion on Role of students as future leaders in climate action on 26.08.2023 in the auditorium of the centre. The expert in the panel discussion were Mr Bhagirath Shetye, Chairman, Goa Board of secondary & higher secondary education, Goa and Mr Rajendra Kerkar, Environmentalist interacted with the students and general public. The Sujeetkumar Dongre, Programme director of centre for environment education was the moderator of panel discussion. Around 102 students and teachers were present o the program.

### **Chandrayan 3 landing**

- **Popular Science Lecture:**  
The Centre organized Popular Science Lecture on topic India's Giant Leap to Moon: Chandrayaan 3 by Dr Reshma Raut Dessai, Assistant Professor in Physics, Goa University on 23.08.2023. All together 260 students, teachers and general public attended the lecture.

- **Live Screening of soft Landing of Chandrayaan 3 Lander on Moon:**

To witness the historic moment of India, the Centre has made arrangement for the live screening of soft landing of Chandrayaan 3 Lander on Moon Surface in the auditorium of the Centre.

### **Mobile Science Exhibition**

The Centre organized Mobile Science Exhibition in Bicholim Taluka of Goa wherein the bus visited 06 schools in the month of August. Apart from science exhibition various other programs such as science demonstration and science film show were organized in schools. Till date 3055 students, teachers and general public visited the exhibition.

## **DISTRICT SCIENCE CENTRE, DHARAMPUR**

### **STEM cell workshop for Teachers (2 batches)**

The STEM cell hands-on training workshop was a collaborative effort between the District Institution of Education and Training Valsad and the American India Foundation. The workshop took place at the District Science Centre Dharampur and was conducted over two separate occasions. from 07.08.2023, to 10.08.2023 & from 23.08.2023, to 25.08.2023. The primary objective of the workshop was to provide specialized training to science teachers who teach students in standard 6 to 8 within the Valsad district. The focus on STEM education reflects a commitment to enhancing science, technology, engineering, and mathematics instruction in the region. A total of 53 + 55 = 107 teachers from the Valsad district participated in this workshop. This high level of participation highlights the strong interest and dedication of educators in improving their teaching methods and incorporating modern scientific topics into their classrooms.

### **Nature Education Camp**

The Innovation Hub at DSC (District Science Centre) Dharampur, in collaboration with Bayer Vapi Pvt. Ltd. and the Range Forest Office, Dharampur, organized a significant Nature Education Camp at the Makadban Reserve Forest, Dharampur on 12.08.2023. The central purpose of this camp was to provide students with an enriching experience centered around nature education, focusing on the biodiversity of the region, the critical need for conserving the local forests, and nurturing a strong and enduring connection with the natural world. The Nature Education Camp drew the participation of a total of 42 students, comprising 17 girls and 25 boys, along with 8 accompanying officials. This rounded up to a total of 50 participants. The involvement of both girls and boys underscores the effort to provide equal opportunities for nature education and conservation awareness.

### **77<sup>th</sup> Independence Day celebration**

The celebration of the 77th Independence Day at the District Science Centre in Dharampur sounds truly vibrant and engaging, reflecting the spirit of patriotism and community involvement. Here's a summary of the key activities that took place during the celebration:

The celebration was centered around the themes of #HarGharTiranga and #MeriMittiMeraDesh.

Illumination of the Main Building: The main building of the District Science Centre was illuminated with tricolor lighting. This striking visual display of the national flag's colors added a sense of festivity and patriotism to the event.

- **Sapling Planting Activity:**

As a part of the celebration, the staff members participated in a sapling planting activity. This initiative signifies the commitment to environmental conservation and the idea that nurturing the earth contributes to the betterment of the nation.

- **Selfies with Tiranga:**

Staff members took selfies with the Indian flag (Tiranga) and uploaded these images onto a portal. This digital participation allowed individuals to express their national pride and receive certificates in acknowledgment of their involvement.

- **Open House Quiz - "Independence Day":**

An Open House Quiz on the theme of "Independence Day" was conducted, engaging both staff members and visitors. This quiz served as an opportunity for participants to test their knowledge of historical events and significance related to India's independence struggle.

- **Patriotic Song Competition:**

The celebration included a patriotic song competition, enabling participants to showcase their artistic talents and express their patriotic sentiments through music.

### **District Level National science seminar**

District Science Centre, Dharampur organized the District Level National Science Seminar-2023, an event that showcased students' engagement with scientific topics and critical thinking. The seminar took place on 21.08.2023, and revolved around the theme "Millets: A Super Food or a Diet Fad?" A total of 14 students participated in the seminar from various middle and high schools in the Valsad district. Among these students,



there were 6 boys and 8 girls, highlighting gender inclusivity. Abhijeet Jha from Marothia English Medium School, Vapi, secured the first prize for his contribution to the seminar. The second prize was awarded to Ayana Shaikh from Sett R.J.J High School, Valsad. A total of 60 visitors attended the seminar. Dr. Indra Vats, Curator of The Lady Wilson Museum in Dharampur, honored the event as the chief guest.

### **Mushroom Cultivation Training Programme.**

The Innovation Hub at the District Science Centre in Dharampur took a proactive step by organizing a hands-on training program titled "Mushroom Cultivation Training Programme." This two-day training aimed to educate participants about the process of cultivating mushrooms and was conducted in collaboration with Bayer Vapi Pvt. Ltd., Vapi. The "Mushroom Cultivation Training Programme" was organized over the course of two days. The first batch of training sessions took place on 07.08.2023 and 08.08.2023, and the second batch occurred on August 9th and 10th, 2023. In all 100 (86 Girls students and 10 boys and 4 farmers) from different villages had participated in the programme. The diverse group of participants included students and farmers from different institutes, highlighting the program's accessibility and broad reach.

### **Soft landing of Chandrayan-3**

Various activities were planned to witness the historical soft landing of Chandrayaan-3 at the District Science Centre in Dharampur on 23.08.2023. A slide display on Launching of Chandrayaan 3 was presented to visitors as part of the center's awareness-raising efforts. A virtual quiz about Chandrayaan-3 and ISRO was held to commemorate the occasion in two batches for student teachers and public visitors. 55 Teachers from District Institute of Education Training, valsad participated in the quiz. Additionally, throughout the day, the Chandrayaan-3 slide show was viewed by more than 250 visitors. Later, at 5:20 pm an audience of over 55 gathered in the auditorium to watch the live screening of the soft landing of the Chandrayaan-3. On Facebook Live, a post on soft landing of Chandrayaan-3 reaches roughly 400 people. The Sky observation program was also organized in the evening to make the celebration memorable. About 45 students and visitors observed Moon craters through telescope.

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