

Events in May 2019

Inauguration of Vigyan Samagam, India's first global, Mega Science Exhibition

Bringing the world's major Mega Science projects together, India's first-ever, global mega - Science Exhibition, 'Vigyan Samagam', was inaugurated on 8th May, 2019, Wednesday, in Mumbai at Nehru Science Centre, Worli. Dr. Vijay Kumar Saraswat, India's renowned defence scientist and a Member of NITI Aayog inaugurated the first edition of Vigyan Samagam.

This multi-venue Science Exhibition, which is planned in the four cities of Mumbai, Bengaluru, Kolkata and New Delhi. The exhibition will be 11-month long duration, commencing its journey from Mumbai today. The Department of Atomic Energy (DAE), Department of Science and Technology (DST), the funding agencies to these projects and the National Council of Science Museums (NCSM), Ministry of Culture, who are venue partner and having expertise in design and hosting such exhibition, have jointly organized this first edition of prestigious Science Exhibition.

Dignitaries such as Dr. V. K. Saraswat, Member NITI Aayog, Prof. K VijayRaghavan, Principal Scientific Advisor, Government of India, Shri Kamlesh N. Vyas, Secretary, Department of Atomic Energy and Chairman of Atomic Energy Commission, Prof. Shri. Ashutosh Sharma, Secretary, Department of Science and Technology, Shri A.D. Choudhury, Director General, NCSM, Dr. Frederick Borday, Director for Accelerators and Technology representing CERN and Dr. Andreas Baun, Ambassador of Switzerland to India graced the event. As a host of this prestigious global Exhibition, Shri Ranajit Kumar, Chairman, Apex Committee, Vigyan Samagam and Head, Nuclear Controls and Planning Wing (NCPW), Shri Arun Srivastava, Head, Institutional Collaboration and Program Division (ICPD), DAE and Convenor of the Apex Committee and Shri Shivprasad Khened, Director, Nehru Science Centre and Dr. Praveer Asthana, Head of Scientific Divisions, Department of Science and Technology (DST) were present on the occasion. Former Chairman, AEC viz Dr. P. Chidambaram, Former PSA to Gol and eminent scientist Dr. Anil Kakodkar, Dr. S. Banerjee, Dr. R.K. Sinha and Dr. S Basu also graced the occasion.

Vigyan Samagam Exhibition has the presence prestigious of organisations such as the European Organization for Nuclear Research (CERN, 'Facility for Antiproton and Ion Research' (FAIR), India-based 'Neutrino Observatory' (INO), 'International Thermonuclear Experimental Reactor' (ITER), 'Laser Interferometer Gravitational - Wave Observatory' (LIGO), 'Thirty Meter Telescope' (TMT) and 'Square Kilometer Array' (SKA). A first-of-its-kind, Vigyan Samagam shall be hosted in a caravan mode at four major Indian cities Mumbai, Bangalore, Kolkata and New Delhi. About 250 visitors attended the programme.

Followed by the formal inauguration of the 'Vigyan Samagam', a two-day scientific event named "Scientre Stage" was also organised during May 8-9, 2019 at the centre. About

590 Scientists, who are involved in these mega projects, from India participated in the “Scientre Stage” event.

National Technology Day Celebration

As a part of National Technology Day celebration on 11th May 2019 in collaboration with Consulate General of Switzerland in Mumbai a Special lecture by Prof Dr Archana Sharma, Principal Scientist, Physics Department at CERN, Geneva on the topic 'Adventures of the Particle Physicists and Why should you care' was organised. Around 270 students and general public attended the programme.

Jallianwala Bagh Massacre

To commemorate the centenary of Jallianwal Bagh Massacre, following programmes were organized at NSC, Mumbai during 13th April – May 12, 2019:

- Screening of film for general visitors- A short film on 'Jallianwala Bagh Massacre was screened every day at the reception area for the visitors during April 13-12, 2019. In all 32 shows were organized and around 1235 visitors viewed the film show.
- Multiple choice written quiz was conducted for the students on the topic on 10th May 2019 in which 156 students participated in the contest. The winners were awarded with prize.
- An open house quiz on the topic was conducted for the general visitors on 11th May 2019. Initially the visitors were briefed about the importance of the event in the history Indian struggle for freedom and then followed by the quiz. Around 29 visitors participated in the quiz. The winners were awarded with the prize.
- On the occasion, a painting contest on the topic “Jalianwala Bagh Massacre” was also organised on 11th May 2018 for vacation workshop students. Only 14 students took part.
- On 11th May a story telling session on the main theme was also organised for the parents and general public. About 30 people participated and enjoyed the session.

Vacation Creative Science Workshops

During the month, 2 batches of vacation creative science workshops in various disciplines were organized from, 10th – 15th May, 2019, 17th – 22nd May, 2019 and 21st – 25th May, 2019 in the disciplines as per the details given below:

Workshop on Arts & Craft: In 2 batches of Art & Craft 55 students participated and completed 8 projects (4 projects per batch per students).

Workshop on Chemistry & Biology: In 2 batches of Chemistry & Biology, 51 students participated and completed 26 experimental projects (13 projects per batch per students).

Workshop on Science Toys making: In 2 batches of Science Toys making workshops, 50 students participated and made 17 science toys. (9 in batch1 & 8 in batch 2 by each students)

Workshop on Computer and Multimedia

Computer and Multimedia workshop was organized at the Centre during 10th – 15th May, 2019. 24 students participated and developed 8 software projects based on flash animation and PowerPoint. Students were also given exposure to fundamentals of computers, MS Word and Excel, Multimedia, Internet, Web browsing etc.

Workshop on Electronics:

A batch of electronics workshop was organised at the centre during 17th – 22nd May, 2019 in which 20 students participated. The participants were introduced to identification and testing of basic components like Resistors, Capacitors, Inductors, Transformers, Diodes, Transistors, IC 7805 Regulator, IC 555 Timer, LEDs, 7 Segment Displays, Relays, LDRs, etc. With help of breadboards and wires, students made basic circuits of Series and Parallel combinations of Resistors, Ohm's Law, Types of Rectifiers (Half-wave, Full-wave, and Bridge), Forward and Reverse biased Diode, Transistor as a switch, etc. They also made PCB Soldering for Transistor as a Switch. They were also introduced with Digital Electronics and different types of Logic Gates and their truth tables.

Workshop on Aeromodelling

2 batches of Aeromodelling workshops were conducted at the Centre for the students of Std. 8th to 10th during 10th– 15th and 17th – 22nd May, 2019. In all 50 students took part in the workshops and made 09 different models of papers, cardboards and thermocol gliders by the students in each batch.

Workshop on Model Rocketry

2 batches of Model Rocketry workshops were organized at Centre during 10th – 15th and 17th – 22nd May, 2019. In all 59 students participated and completed 4 different types of rocket models in each batch and also launched them.

Workshop on Astronomy

2 batches of Astronomy workshops were held at the Centre for the students of Std. 8th to 10th during 10th–15th and 17th – 22nd May, 2019 in which 40 students participated. 6 projects were made by each student in each batch. The participants were also given the exposure of Science on a Sphere show on Astronomy.

Science Sparkle Workshop

As part of Vacation Creative Science Workshop, 2 batches of Science Sparkle Workshops for young students of std. 3rd to 5th were organized at the Centre during 1st – 3th May and 27th – 29th May, 2019. 130 students participated and made 130 sets of 15 projects, like paper rockets, paper helicopter, cup helicopter, Flying fish, oscillating woodpecker, straw sprinkler, etc. by using low cost materials

Arduino Based Workshop

4 days Arduino Based Workshop started on 6th May 2019 at Innovation Hub of the center in which 17 students participated. They were introduced to different types of advanced open platforms for prototyping and testing of electronic circuits. They were also introduced with Arduino Platform using Arduino UNO Board and Multifunction Arduino Shield having onboard Switches, LEDs, Buzzer, 7-Segment Display, along with Sensors like PIR (Passive Infrared – HC-SR501), Ultrasonic (HC-SR 04), etc. Students also introduced to write and modify coding / programming using C / C++ Programming Language in Arduino IDE (Integrated Development Environment).

Students made projects like Input / Output Configuration of different Digital and Analogue Ports/Pins, Controlling LEDs, Controlling Buzzer, Controlling Switch Input, 4 Digit 7 Segment LED Display to Show different digits and the readings of Sensors, etc.

Students also introduced with STEMA Concepts (Science, Technology, Engineering, Mathematics and Art) to find out real world problems and their possible solutions with the gained knowledge of Arduino / Programming.

Junior Robotics Workshops:

3 batches of Robotics Workshops for the Jr. Group students were organized at the Centre during 30th April – 3rd May, 10th- 13th May and 17th- 20th May, 2019 respectively. In all 69 students participated in the workshops. During the period, the participants made basic boat assemblies to test 3 types of sensor responses viz. Touch Sensor, Colour Sensor, Ultrasonic Sensor with EV3 Controller of LEGO MINDSTROMS Core Set. With the help of LEGO Software, students made their programs and tested on EV3 Controller.

On the basis of tasks performed each day and programming concepts of different logics; students participated in 1 Minute Competition to complete the specified task of the competition, in teams of 3 Students.

Senior Robotics Workshops:

2 batches of Robotics Workshops for the Senior Group students were organized at the Centre during 22nd – 25th, and 27th – 30th May, 2019 respectively. In all 47 students participated in the workshops. Participants made basic boat assemblies to test 4 types of sensor responses viz. Touch Sensor, Colour Sensor, Ultrasonic Sensor and Gyro Sensor with EV3 Controller of LEGO MINDSTROMS Core Set. With the help of LEGO Software students made their programs and tested on EV3 Controller. To control robot movement, they made projects to test Line Counting and stop at particular line, Line Follower, Obstacle Avoider and Detector, Obstacle Placing at respective Locations Using 3rd Medium Motor, Wall Follower, Touch Controlled Robot, Forward-Backward Movement, Different types of Turning Robots, Movement in different paths like Circular, Square, Rectangular, Angular Path of Infinity Figure, etc. They also tried Bluetooth Communication while Programming the Robots and also 2 EV3 Controllers controlled by Bluetooth Communication.

Last day on the basis of tasks performed each day and programming concepts of different logics; students participated in 2 Minute Competition to complete the specified task of the competition, in teams of 3 Students.

Outreach programmes:

Report on 'Joy of Experimentation' workshop Nehru Planetarium

The Centre has organised an outreach workshop 'Joy of Experimentation' in Nehru Planetarium on Thursday, 16 May 2019 from 10.00 a.m. to 1.00 p.m. During the workshop science demonstration lecture was conducted in the Hall Of Quest on various themes such as 'Fun with Physics', 'Colourful Chemistry', 'Fun at Low temperature' etc. The target group for the workshop was school students of standards VII & VIII. About 15 students actively took part in this workshop.

Report on outreach SDL at Sahitya Sahawas, Bandra

An outreach science demonstration lecture was organised at Sahitya Sahawas, Bandra on Monday, 20 May 2019. As a part of the programme special demonstrations on Chemistry were arranged to mark International Year of Periodic Table 2019 and Liquid Nitrogen Show was also organised. In all 36 for Senior Citizens were present & enjoyed the programme. The lecture was followed by a question-answer session.

World No Tobacco Day Celebration

To create awareness among the people about the ill effects of Tobacco, World No Tobacco Day was celebrated at the Centre on 31st May 2019 by organising a popular science lecture on the topic "Tobacco Menace Where We Stand." The lecture was delivered by Dr. Sunali Khanna, Associate Professor, Nair Hospital Dental College. About 240 students and parents attended the programme.