



# ANNUAL REPORT 2021-22



**Pushpa Gujral  
SCIENCE CITY**

The Science of WOW





# **Annual Report**

# **2021-22**



## **THE LOGO OF SCIENCE CITY**

The Logo depicts the traditional Indian philosophical concept of cosmic energy in the form of a meditating posture. An eternal flame of knowledge has radiating hallows which signify dissemination of knowledge and wisdom to all.

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Get ready to encounter Tesla coil, hair-raising Van de  
Graaff generator, spark ladder, spark wheel & much  
more... in our

**ELECTRICITY GALLERY.**

**COMING SOON!**



# Message from the Desk

The year 2021 has been a challenging year. The pandemic persisted, yet there were glimmers of hope as we used this time to set up new galleries and learned new skills. The Mathematics Gallery was completed and inaugurated on November 24 by Sh. Gurkirat Singh Kotli, Hon'ble Minister, S & T, GoP. I express my gratitude to the State Govt. and Govt. of India for providing funds for setting up this Gallery. The Nuclear Power Gallery at Science City was upgraded by the Nuclear Power Corporation of India Limited as part of their pan-India project to set up nuclear zip galleries at various Science Centers across India.



The support of science lovers helped the Science City adapt and inspire learning during another year of the extraordinary challenges of the pandemic. Trust in science is more important than ever, and science museums are essential to building STEM confidence and showing all people that there is a place for them in STEM. Despite the pandemic's limitations, PGSC has covered enough ground this year too, deliver science and education centering equity. Despite the obstacles which we had experienced, PGSC has continued to move forward through its dedicated staff by reaching out to various target groups through our science communication activities. We organized 117 events (108 online and 9 onsite) with 10,587 participants in 2021-22.

The Science City was reopened for visitors w.e.f June 16, 2021 after closure on March 26, 2021 due to unprecedented conditions arising on account of COVID second wave and Government guidelines. As the visitor numbers gradually increased, our activities shifted from online to hybrid mode. Mobile Science Exhibition came back into action reaching out to rural areas and more and more students walked in to learn about environmental issues under the compulsory Environment Study Course.

The past year witnessed onsite activities like: Food and Nutrition show, the first ever organic food show in town where organic farmers across Punjab displayed and sold their organic food products and an innovative street food competition in which students from Hotel Management institutes/colleges and housewives showcased their talent; Domesticated Animal Biodiversity Exhibition and Dog Show in which more than 40 dog breeds participated; National Energy Conservation Day in which more than 300 students participated in Science Drama and Project / Model Display; Children's Day involving participation of students in painting competition and National Mathematics Day which was organized both online (in collaboration with HIMCOSTE for students of Himachal Pradesh) and Offline ( in collaboration with PSCST for students of Punjab).

Amidst all this, we ensured that strict COVID protocols and guidelines were followed in all our off-line activities. Our team worked hard to create COVID-safe fun experiences- mandatory face masks, limited capacity and other physical distancing measures. There was special attention being paid to highly trafficked areas and high-touch surfaces throughout the campus and its exhibits and we switched over from touch buttons to sensor based buttons wherever possible.

We are excited not only to look ahead but also to introducing our audiences to new vistas of science through two new galleries ( Mission Tandrast Punjab and Electricity Gallery) work on which started during the year. In these unprecedented times, we have held fast to our mission and are thankful to the Deptt. of School Education, Punjab for Vigyan Yatra and the Punjab Govt. for its support during COVID times. We look ahead optimistically to how we can contribute to a more curious, creative and resilient world.

Dr. Neelima Jerath



A close-up, low-angle shot of a NAO humanoid robot. The robot's head, featuring a camera lens and sensors, is visible in the upper right corner. Its right arm is extended downwards, showing the jointed structure of the arm and hand. The background is a bright, out-of-focus blue sky. The overall image has a blue tint.

# Meet our humanoid Robot...

## NAO

**NAO is a smart interactive Humanoid Robot. It has 25 Degree of Freedom and is equipped with various sensors. By virtue of this, it can walk, dance, speak, and recognize faces and objects. It is a programmable robot that enables user or teachers to create interactive and customized teaching activities. Nao 6 is the 6th generation of the interactive humanoid Robot**

# Vision

To be an institution of excellence to inculcate scientific temper and nurture creativity especially in the young minds.

## Mission

To be a place for :

- Education: Creating Avenues for non-formal learning of Science & Technology.
- Developing a knowledge Society: Offering everyone – children and adults, general public and students – opportunities to experience every day science in our lives its well equipped resource centres.
- Demonstration: Explaining complex scientific concepts and emerging technologies in a simplified way.
- Information: Dissemination on the latest developments in science and technology.
- Innovation: Providing opportunity to individuals to think 'out of box' and try out their ideas in the design and development of new products.
- Edutainment: To learn through hands-on experience, fun and entertainment.

## OBJECTIVES

- To build scientific temper among the general masses and to develop an informed and knowledgeable society.
- To supplement formal science education, create excitement among students about science & technology and enthuse them to take up careers in science & technology.
- To promote creativity and innovation among the young generation.
- To promote education for sustainable development.





# 2021-22 at a Glance

No. of Visitors

**206087**



**2**

**New Galleries**

**Mathematics Gallery**  
**Nuclear Power Gallery**

**117**

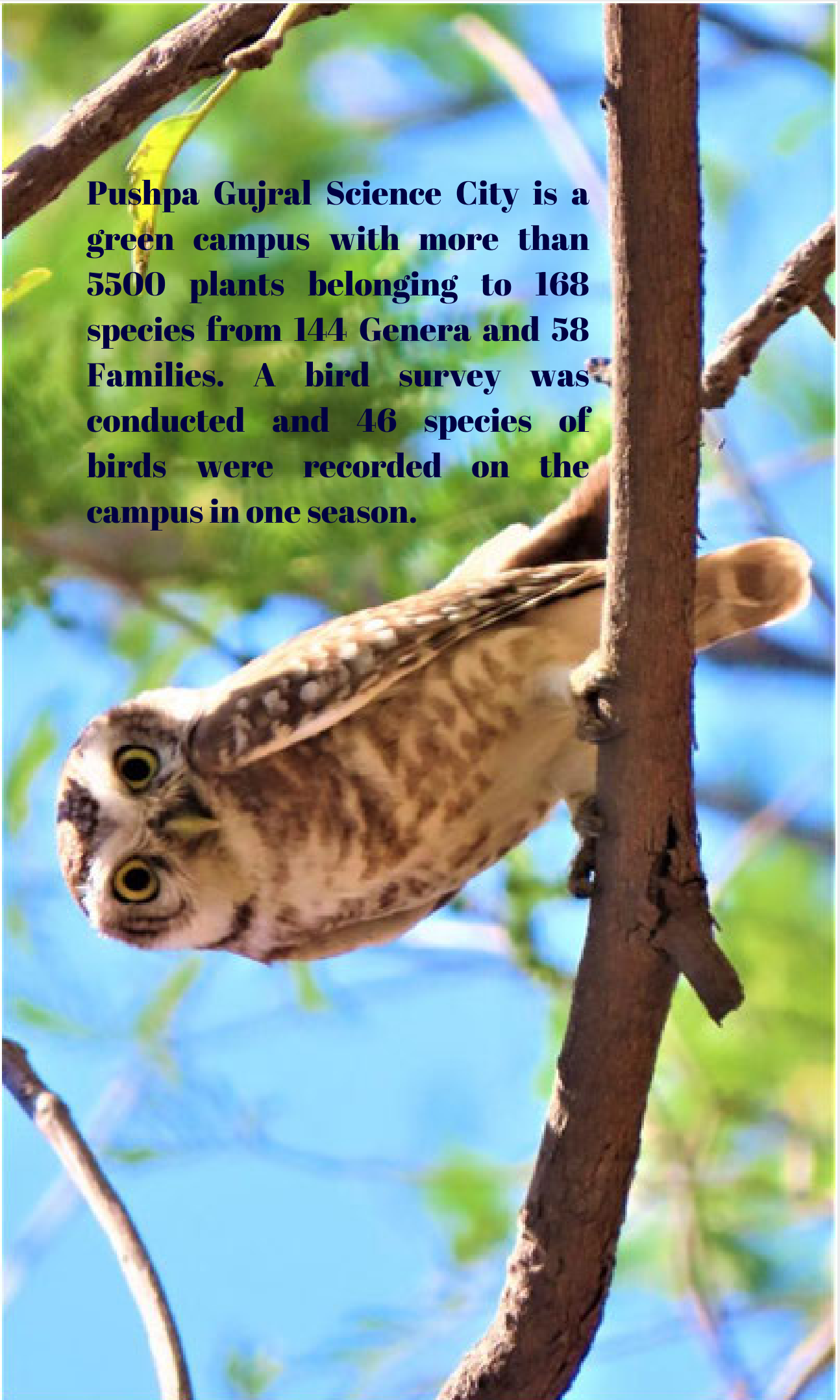
**Events**

**10, 587 participants**





**Pushpa Gujral Science City is a green campus with more than 5500 plants belonging to 168 species from 144 Genera and 58 Families. A bird survey was conducted and 46 species of birds were recorded on the campus in one season.**



# Things to Do & See

## **Large Format Film Theatre:**

Science City hosts a Large Format Film Projection System. It is housed in a dome, which is distinctive outside as well as inside. On the outside, it is covered with 25 lakh computer-designed tiles of one square inch each and looks like a giant globe. Inside, it has a large format film theatre with a 23-metre diameter screen (10 times larger than a 35 mm screen) which provides an immersive experience.

## **Digital Planetarium:**

The most amazing experience is to see the night sky, and a guided tour through the planets & constellations through multi-channel digital planetarium system .

## **Virtual Expeditions (Flight Simulator):**

Another activity which causes an adrenaline rush, is a three-minute ride in a 30-seater flight simulator. It feels as if one is zooming through the stars in an alien universe or making death-defying leaps on a roller coaster.

## **Climate Change Theatre:**

It is a unique experience-filled theatre showing synchronized videos on two screens- flat and dome shaped and illuminating the static and moving fibre glass objects along with special light and sound effects, as the video displays storyline of the film.

## **Life Through the Ages:**

The panorama takes you on an amazing journey through the history of life, provides an insight on how the Earth and life on it has evolved. The Panorama displays the major events from Origin of Earth-Big Bang, Origin of Life, Unicellular animals/plants to Multi cellular animals/plants, Dinosaurs and prehistoric man to modern man.

## **Dinosaur Park:**

One of the biggest Dinosaur Parks, it has Life size dinosaurs, 44 in number of different eras in an island surrounded by a water body. Also meet 6 Robotic Dinosaurs with movements and special sound effects placed under a volcano as well as a moving dinosaur.

## **State level Energy Education & Awareness Park:**

This Park demonstrates uses of various forms of non-conventional energy sources such as Solar energy, Hydel energy, Wind energy, Bio energy etc. 20 KW energy is generated through Solar Energy to run all the exhibits in the Energy Park.



**Virtual 3-D Show:**

Here, visitors see the objects flying out of the screen coming in every direction; creepy characters reaching out to grab you giving a feeling that you are a part of the action.

**Indoor Laser Show:**

This laser show takes visitors to the wonderland where one would experience sudden shots of fog with mind-boggling sound and laser beams.

**Earthquake Simulator:**

30-seater Earthquake Simulator provides visitors a realistic experience of being in an earthquake. The computer-controlled simulator demonstrates how much a city will shake and heave if there is an earthquake measuring say 5, 6, 7 or 8 on the Richter Scale.

**Amazing Living Machine (Health Gallery):**

The gallery deals with various aspects of the human body from embryonic to full body development, aging and demonstrating anatomy, physiology, diagnostics and genetics through interactive and attractive exhibits. The star attractions of the gallery are: Transparent Man theatre, walk through Giant Heart, CT Scanner, Operation theatre, Countdown to Birth, and various other interactive exhibits.

**Fun Science Gallery:**

70 assorted interactive exhibits designed, structured and clustered on the basis of basic fundamental science themes reflecting upon principles of mechatronics, optics and sound in the most engaging and interactive manner

**Mathematics Gallery:**

The Gallery helps students understand Maths in a fun and interesting way through interactive exhibits and hands on activities. It is divided in to different sections like Number system, Geometry, Arithmetic's, Trigonometry, Interactive math, puzzles and activities corner.

**Virtual Reality & Cyber Space Gallery:**

This gallery consists of awe-inspiring sections like Cyber Space, Virtual Reality Shadow Control, and Virtual Game Stations.

**Ames Room and Gallery of Illusions:**

Set up in the gallery of Illusions, Ames room creates an optical illusion in which people appear as dwarfs or giants when moving from one corner to the other. It was invented by American scientist Adelbert Ames, Jr. in 1946 to screw the brain. The gallery also takes you through a vortex, spinning your brain cells in a make - believe environment.

**Space & Aviation Gallery:**

The gallery displays cut-view models of satellites and various applications of space technology. The major constituents of the gallery are: Astronomy - our Universe; Solar System; Satellites launching Vehicle, Living in space etc.

**Science of Sports:**

The Gallery is an ideal place to understand science behind various sports through playful and non-formal approach. The gallery intends to familiarize the visitors with the applications of scientific principles in sports - role of gravity, projectile motion, momentum, force, energy, impulse, Newton's Law of Motion, material used in sports equipment etc. and understanding of improving performance in sports.

**Defence Gallery:**

Defence gallery consists of weapons and aircrafts that were used during World war- 2 and various other indigenously built aircrafts. The main attractions are Vijyanta Tank, Anti aircraft gun & aircraft MIG 23. A 2-seater Air Craft Swati LT-11 donated by the Govt. of Punjab to the Science City is also installed for giving sit-in experience to the visiting public.

**Railway Gallery:**

Dioramas of technologically challenging and visually inspiring railway tracks have been set like Kalka-Shimla Railway track, Jammu- Srinagar railway link, the Bullet Train of Japan, Delhi Metro and principle of levitation used in high speed trains and engine simulator.

**Bird Gallery:**

The gallery captures wide diversity of birds with models of national and state birds. A large banyan tree located in its centre displays commonly available birds species of the state mounted on it. This tree structure is surrounded by wetland diorama consisting models of species/varieties of flora and fauna available in state wetlands surrounded by replica of natural scenic beauty.

**Other galleries include, Biotechnology, Drug deaddiction, HIV/AIDS, etc.**



# *Review of Year 2021-22*



# Mathematic Gallery Inaugurated



In an effort to further promote STEM education in the State and ensure that Mathematics learning is fun for children, Pushpa Gujral Science City has set up a Mathematics Gallery. The gallery was inaugurated by Sh. Gurkirat Singh Kotli, Minister for Science and Technology in the presence of Sh. Dilip Kumar, Secretary, Science, Technology and Environment, Govt. of Punjab on November 24, 2021.

The Gallery helps students understand Maths in a fun and interesting way through interactive exhibits and hands-on activities. It is divided into different sections like, Number system, Geometry, Arithmetic, Trigonometry, Interactive maths, puzzles and activity corner. Here you can learn about the decimal system through fishes, the binary system, complex algebraic equations through blocks, geometry, statistics and mensuration through interactive exhibits, as well as, ride a square wheeled cycle, smooth ride on a bumpy base using Reuleaux principle, look at a water clock or make music through waves and vice versa. The Brahma's Tower is another interesting exhibit. Also see the golden ratio exhibit to see how maths dominates in nature and is linked to beauty.





## *Nuclear Power Gallery Opens to Public*

The Nuclear Power Corporation of India Limited has upgraded the Nuclear gallery located in the Energy Park of Pushpa Gujral Science City. The aim of the gallery is to propagate awareness for enhancing and improving the public perception and understanding of Nuclear Power in the country. The gallery was inaugurated by Dr. Neelima Jerath, Director General Science City on July 14, 2021. The gallery showcases various aspects of nuclear energy, benefits and hazards of nuclear power and its applications for the betterment of human life and environment. The gallery also focuses on several salient aspects of nuclear power generation through fascinating audio video interactive exhibits.



## *Back into action*

### **Reaching the Unreached through Mobile Science Exhibition Bus:**



Mobile Science Exhibition is a flagship programme of Pushpa Gujral Science City (catalyzed and supported by DST, GoI). This "Exhibition on the wheels" was conceived to reach out to a wider section of the Society, especially rural population, to inculcate scientific temper in the masses. The exhibition tour restarted in July 2022 after the COVID pandemic, as per route provided by Department of School Education. The exhibition covered 73 sites, 231 schools and reached out to 50,086 students and general public in rural areas (Distt. SAS Nagar, Fatehgarh Sahib, Patiala, Sangrur, Mansa and Bathinda, Fazilka, Muktsar Sahib and Faridkot). The project is jointly implemented by Punjab Technical University and Pushpa Gujral Science City.

## **SD-ASK (Sustainable Development-Attitude, Skills and Knowledge) program launched**

To strengthen its efforts to communicate information on Sustainable Development Goals, an innovative program titled 'SD-ASK' was launched by PGSC to motivate children and youth for positive action on SDGs. The program is being undertaken in partnership with the SDG Coordination Centre of UNDP. The program was launched by Mr. Vikas Verma, Regional Head, UNDP on World Environment Day 2021.

SD-ASK program focuses to make children aware of citizen's role in achieving Sustainable Development, promote knowledge dissemination in the area and moulding their attitudes through activities, demonstrations, competitions, film shows and expert talks. Celebrating 75 years of India's Independence, PGSC reached out to 75 schools across Punjab to set up SD-ASK clubs. Every fortnight an activity on a particular SDG is being organized for the clubs. Activities undertaken during 2021-22 include, expert talks, demonstrations, hand-on activities, etc.

### **Field Visits under Environment Studies:**

A mandatory course on Environment Studies has been introduced by UGC in all under-graduate classes which includes a mandatory Field visit to areas providing environmental information. Since PGSC has several facilities and exhibits on various aspects of environment which can cater to the requirement of the course, students from several universities /colleges visit PGSC under the compulsory course on "Environmental Studies". In the year 2021-22, total 3186 students from Gulzar Group of Institutions, Khanna; Punjabi University, Patiala; Maharaja Ranjit Singh Punjab Technical University, Bathinda; Desh Bhagat University, Mandi Gobindgarh; Guru Nanak Prem Karamsar College, Nadala;

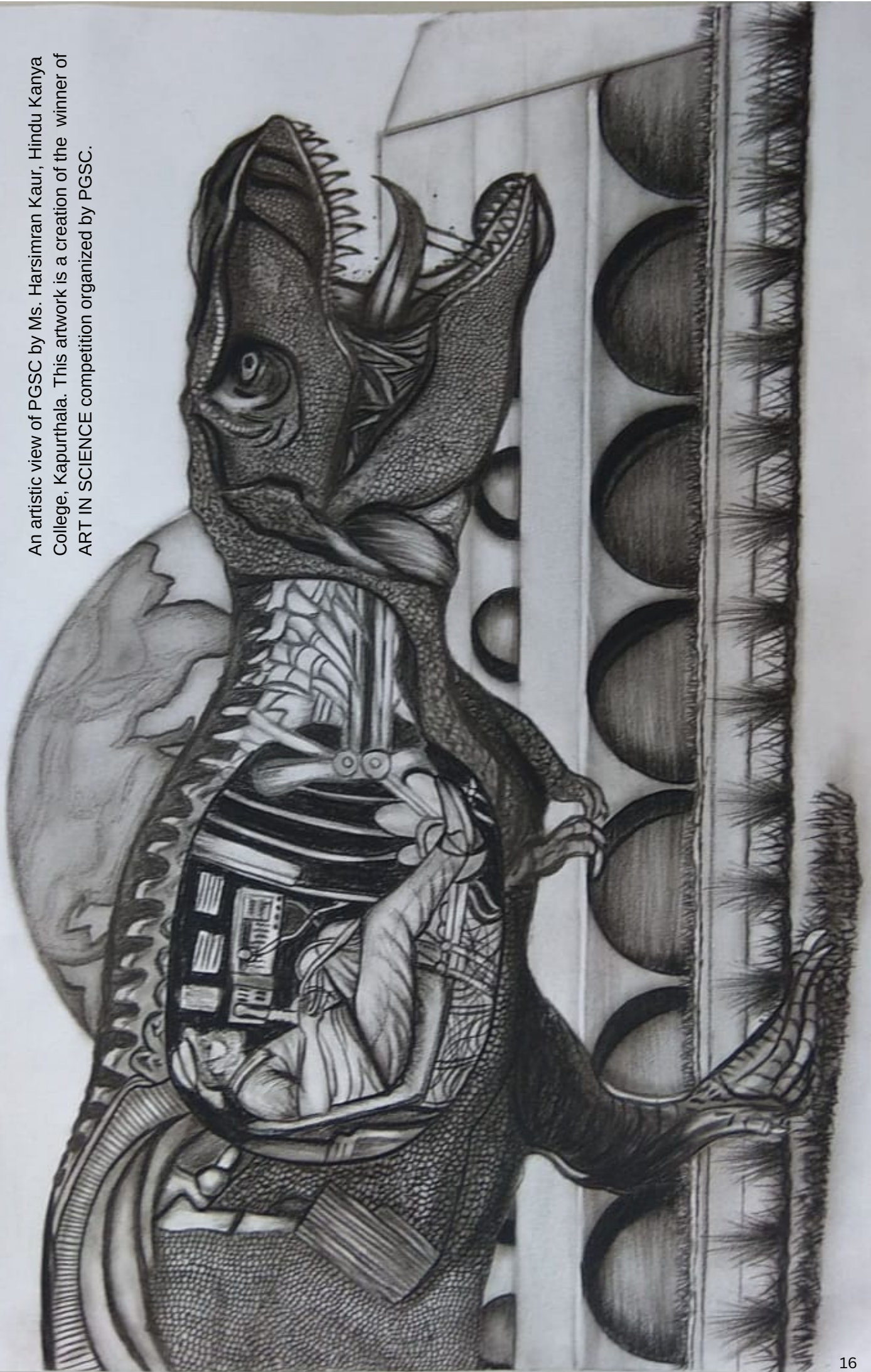
Khalsa Girls College, Morinda Sachdeva College, Mohali; Punjab College of Commerce, Fatehgarh Sahib; Sant Namdev Kanya College, Fatehgarh Sahib; Akal College, Sangrur; DAV College, Bathinda; SDAM College, Dinanagar; Govt. Ranbir College, Sangrur; DAV College, Bathinda; HVM College, Jalandhar; SBAS Khalsa College, Sangrur; Department of Business Studies, Punjabi University, Talwandi Sabo; SUS Govt. College, Sunam; Dev Samaj College for Women, Ferozepur; Hindu College, Kapurthala; SDSPM College for Women, Rayya; KMRD Jain College for Women, Malerkotla visited Science City.



Punjabi University, Patiala and Guru Nanak Dev University, Amritsar have already made students visit to Science City mandatory once in their undergraduate studies under the programme.



An artistic view of PGSC by Ms. Harsimran Kaur, Hindu Kanya College, Kapurthala. This artwork is a creation of the winner of ART IN SCIENCE competition organized by PGSC.

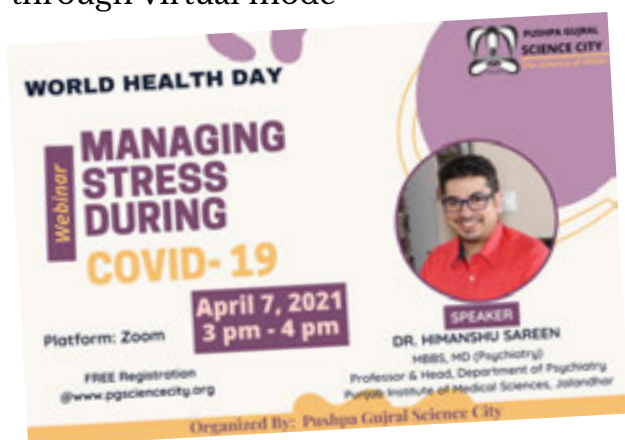


# Days & Events

PGSC celebrated 47 nationally and internationally important days and organized 17 additional events in 2021-22. Also, 48 workshops/science camps were organized in this period.

## World Health Day (April 7, 2021)

Pushpa Gujral Science City celebrated the day by organizing a webinar on “Managing Stress during Covid-19”. Dr. Himanshu Sareen, **Professor and Head, Department of Psychiatry, Punjab Institute of Medical Science, Jalandhar** was the key speaker at this occasion. Delivering a talk, he said that stress should not be seen in isolation but in relation to how the event is perceived, available social support and coping capabilities. Around 200 students and teachers from all over Punjab participated through virtual mode



Dr. Vinayak Sinha  
Associate Professor, IISER, Mohali



## APRIL COOL DAY

PGSC organized a competition on "Turn APRIL FOOL'S DAY into APRIL COOL DAY" on April 1, 2021. Participants were asked to Plant a Tree and upload their picture on [www.pgsciencecity.org](http://www.pgsciencecity.org). The best entries were displayed on PGSC's website. Top Five entries were given FREE package ticket to Science City.



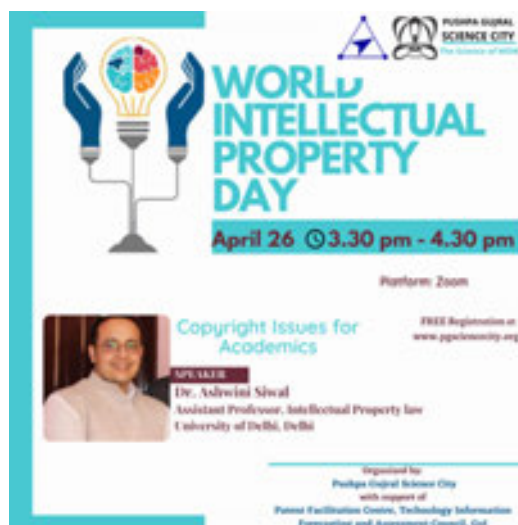
## World DNA Day (April 25, 2021)

A webinar at the occasion of World DNA Day was organized to mark the discovery of the double helix structure of deoxyribonucleic acid (DNA) by James Watson and Francis Crick in 1953. Dr. Sanjay Kumar, Director, **CSIR-Institute of Himalayan Bioresource Technology, Palampur, Himachal Pradesh** was the key speaker at the occasion. Delivering his talk on “DNA: The molecule of life” said that DNA is a type of chemical code that contains instructions; known as genes, for how the body and all its different parts grow, develop, function, and maintain themselves.



## World Intellectual Property Day (April 26, 2021)

World Intellectual Property Day is observed annually on 26 April. The event was established by the World Intellectual Property Organization (WIPO) in 2000 to raise awareness of how patents, copyright, trademarks and designs impact on daily life and to celebrate creativity, and the contribution made by creators and innovators to the development of societies across the globe. Dr. Ashwini Siwal from **University of Delhi, Faculty of Law**, an expert in copyrights spoke to youth on issues related to copyright and plagiarism. These issues have become important in the internet era when a wealth of information is easily available to students and the cut-paste culture has become prevalent.



## Webinar on Teachings of the Guru: Science & Innovative Thinking

*400th Birth Anniversary of Guru Teg Bahadur Ji celebrated*

The world celebrated the 400th Birth Anniversary of Guru Teg Bahadur Ji. To mark the beginning of commemoration, Pushpa Gujral Science City organized a webinar on “Teachings of the Guru: Science & Innovative thinking”. Mr. Harjinder Singh Cheema, **Managing Director, Cheema Boilers Limited** was the expert speaker at this occasion. He exhorted the youth to follow Guru Sahib’s teachings and cultivate traits of self-confidence, commitment, courage, and communication skills to be successful in life and shared some of his innovations with the participants. He also demonstrated his innovation on fuel efficient cremation system developed with IIT Ropar during the COVID 19 pandemic to facilitate mass cremations. Around 150 students participated in the webinar.



The youth needed to follow the high values put forth by our Gurus and work hard to provide solutions to societal problems through use of Science & Technology. Only innovations could lead us to the path of sustainable development and the youth should aspire to become job providers instead of job seekers.

Sh. Harjinder Singh Cheema

## National Technology Day ( May 11, 2021)

Science City celebrated National Technology Day by organizing a webinar on “Invention and Innovations: Flexible Engineering Materials”. Dr. Kushal Sen, **Professor, Department of Textile Technology, IIT Delhi** was the key speaker on this occasion. Dr. Sen in his lecture explained how fibres can be engineered to produce highly attractive and useful products. He informed that Fibres possess unique characteristics and can be modified to introduce various functional properties as well which can be used to create various innovative products at scales varying from macro, to micro, or to nano levels. Around 150 engineering college students from all over Punjab participated through virtual mode.

Science, Technology & Innovation plays a very important role in the growth of the national economy and to improve its efficiency. Inventions do not happen every day, the innovations however may. Innovation can be a new approach to a problem, a change in behavior, or a new way of using existing resources.

Dr. Kushal Sen  
Professor, IIT Delhi

## World Telecom Day (May 17, 2021)

World Telecommunication and Information Society Day (WTISD) is observed every year to raise awareness about the possibilities of the use of the internet and other information and communication technologies (ICT) in bringing societies and economies together by bridging the digital divide. A webinar on differentiating features of “5G” technology was organized to celebrate this day. The theme for this year World Telecom Day was “Accelerating Digital Transformation in challenging times”. Dr. Swades De, Professor, Department of Electrical Engineering, IIT Delhi was the key speaker at this occasion. Dr. De gave an overview of edge computing in smart IoT, energy sustainability, green communication and network coexistence. Around 150 Engineering college students from all over Punjab participated.



"5G network is regarded as the most significant jump in the history of wireless communication due to its differentiating features like cost & energy efficiency, hyper fast, low latency and reliability."

Dr. Swades De  
Professor, Department of Electrical Engineering, IIT Delhi

## International Museum Day (May 18, 2021)

The International Council of Museums (ICOM) established International Museum Day in 1977 to increase public awareness of the role of museums in the development of society. At this occasion, PGSC provided virtual visit of Science City to its science enthusiasts on May 18 & 19, 2021. Over 500 children enjoyed the virtual experience of Science City.

## National Dengue Day (May 16, 2021)

May 16 is observed as the National Dengue Day in India. The World Health Organization has acknowledged the growing prominence of dengue infections across the world in the past decade. Science City celebrated National Dengue Day by organizing a webinar on “Strategies to prevent Dengue epidemic during Covid-19 pandemic”. Dr. Kulbir Kaur, Director Principal, Punjab Institute of Medical Science, Jalandhar was key speaker at the occasion. Around 200 students, teachers, doctors and nurses from all over Punjab participated through virtual mode.



"We are already in the grip of a second wave of covid pandemic which was putting immense pressure on our health care facilities and if we face another epidemic of dengue, it would have devastating consequences and could lead to collapse of the health system".

Dr. Kulbir Kaur  
Director Principal, Punjab Institute of  
Medical Science, Jalandhar



## International Biodiversity Day

### *Biodiversity week celebrated*

The International Day for Biological Diversity is celebrated each year on May 22. 'We're part of the solution' was the theme for this year. PGSC organized a series of webinars (May 20 - May 22) at this occasion. Besides, an essay writing competition was also organized for the students involving participation of 188 students.



- Webinar on '**Diversity in Moths and Butterflies and their role in Ecosystem**' was the first webinar of the series organized on May 20. Dr. H.S. Rose, **Former Pro Chancellor, Guru Kashi University, Talwandi Sabo** was the resource person.

- Webinar on '**Saving the Asian Vulture**' was organized on May 21. **Dr. Munir Virani, Executive Vice President at The Peregrine Fund -World Center for Birds of Prey (From USA)** was the key speaker at the occasion.



- Webinar on '**Medicinal Plant Diversity and natural remedies for COVID**' was organized on May 22. **Dr. Sudhir Kumar Mahotra, Conservationist & Physician consultant, Pathankot, Retd. District Ayurveda Office and Hon. Wildlife Warden** was the speaker.

- **Essay Writing Competition: An Essay writing competition on the theme: Preventing Pandemics: Why Biodiversity Matters?** The competition got an overwhelming response from students. 185 entries from 33 Schools from PAN India (states like, Kerala, Maharashtra, West Bengal, Andhra Pradesh and Uttrakhand, etc) were received.

### Webinar on 'Industry and Access & Benefit Sharing (ABS) provisions under the Biological Diversity Act'



Dr.V.B Mathur Sh. Bhavdeep Sardana Dr. Neelima Jerath Sh. J Justin Mohan Dr. Geetha Nayak Mr. Sanjay Kumar Dr. Jatinder Kaur Arora

The webinar was organized in collaboration with Confederation of Indian Industry (CII) and was supported by Punjab Biodiversity Board and National Biodiversity Authority, GoI. It was attended by about 300 industrialists, experts, researchers, Biology students and teachers from across the country. Dr. V. B. Mathur, Chairman, National Biodiversity Authority was the Chief Guest at this occasion. Dr. Mathur spoke on "National & International Perspective on the need and importance of ABS".

The Speakers and topic of their talk were as under:

- Sh. Bhavdeep Sardana, Chairman, CII-Punjab : "Industry & ABS: breaking the myths"
- Dr. Neelima Jerath, Director General, PGSC: "A brief Introduction to Biodiversity and ABS mechanism"
- Sh. J. Justin Mohan, IFS, Secretary, National Biodiversity Authority: "ABS Guidelines, Procedures and Case Studies"
- Dr. Geetha Nayak, GIZ: "Economics and Biodiversity: ABS and Business"
- Sh. Sanjay Kumar, Country Manager, Valagro Biosciences Limited, Hyderabad (Recipient of India Biodiversity Award 2021): "The ABS Experience: Perspective of an Industry"
- Dr. J.K. Arora, Executive Director, PSCST: "Role of Punjab Biodiversity Board in implementing the Biodiversity Act, 2002"



## World Environment Day (June 2-5, 2021)

- *Launch of SD-ASK*
- *Panel Discussion*
- *Film Festival*
- *Quiz Competition*

A four Day event was organized jointly with Punjab Pollution Control Board in collaboration with United Nation Environment Programme (UNEP) and Centre for Environment Communication (CEC) at the occasion of World Environment Day 2021.

02.06.2021: **Quiz on Nature, Environment and Sustainable Development.** Mr. Saurabh Gupta, IFS, Director, **Directorate of Environment and Climate Change, GoP** was the Chief Guest. The quiz was conducted by Quiz Masters – Ms. Puja Ahluwalia and Ms. Shabnam Sharma from The Deen's Academy, Bangalore. 238 participants registered, out of which 111 participants were selected for participation in the Quiz competition as per guidelines. Five innovative rounds were conducted to select the winners.



03.06.2021: For the first time PGSC organized an online film festival which was launched by the Chief Guest, Dr. S. S. Marwaha, **Chairman, Punjab Pollution Control Board**. "A Second Hand Life" (English) (by Mr. Nutan Manmohan, Filmmaker) was screened. The audience interacted with Mr. Piyush Sharma, Editor of the film. The event was attended by 524 participants.



04.06.2021: Screening of Film "Endemic Species Conservation" (English) (by Mr. Prakash Matada, Filmmaker) and "Flight to Freedom – The Amur Falcon Story" (English) – (by Ms. Rita Banerji and Ms. Shilpi Sharma) was organized. Special Guest was Dr. R.B.S. Rawat, IFS, **Former PCFF and HoFF, Uttarakhand**. The audience interacted with Mr. Ram Alluri, Filmmaker and Ms. Bano Haralu, an actor in the film.



05.06.2021: Screening of Film "Eco Grants: Incubating Youth Ideas" (English), a program organized by Ms Alka Tomar, **President, Centre for Environment Communication (CEC), New Delhi**. The participants interacted with Ms. Kunjpreet Arora, Eco Grantee and other Eco grantees.



**Panel Discussion:** A panel discussion on "Ecosystem Restoration to Achieve SDG Targets" was organized at the occasion which was chaired by Dr. Vikas Verma, **Regional Head, UNDP**, Dr. Nidhi Nagabhatla, representative of **United Nations University-CRIS, Belgium** and Er. Krunesh Garg, **Member Secretary, Punjab Pollution Control Board** were the panelists. The panel discussion was moderated by Director, General, Pushpa Gujral Science City, Dr. Neelima Jerath. At this occasion, SD-ASK ( Sustainable Development-Attitude, Knowledge and Skills) was launched by PGSC.



Dr. Vikas Verma  
Regional Head, UNDP



Dr. Nidhi Nagabhatla  
United Nations University-CRIS, Belgium



Er. Krunesh Garg  
Member Secretary, Punjab Pollution Control Board

## International Yoga Day (June 21, 2021)

Pushpa Gujral Science City celebrated International Yoga Day by organizing a two days online workshop. Expert Yoga practitioner, Col. Sewa Singh was the resource person at this occasion. The main objective of the program was to learn a holistic approach to health and well-being of our body, mind, and spirit simultaneously. The workshop started with warming up and stretching followed by Asanas including a series of Padmasanas, Sukhasan, Tadasana, Bhujang Asana and ended with Shavasana. Col. Singh emphasized on performing Asanas regularly for 5 to 10 minutes daily for a happy and stress free life.



**Dr. Nakul Parashar**  
Director, Vigyan Prasar, India



**Dr. Rintu Nath**  
Scientist F, Vigyan Prasar, India



**Ms. Kathryn Tuccelli**  
Communications Analyst, Corporate  
Communications, OXY, USA



**Ms. Nishat Nayla**  
SDG Educator,  
Deptt. of Education, Bangladesh



**Mr. Dustin Wenzel**  
Communications Consultant  
Houston, USA



**Mr. Rajeev Bhaskar**  
Chief Editor  
Punjabtribune.com, India

## International Webinar on Science Journalism: From Print to Screen (September 24, 2021)

Science City, jointly with Vigyan Prasar, organized International webinar on 'Science Journalism: From Print to Screen' to provide a platform to budding journalist to improve their skills and develop professionalism in Science Communication. Dr Nakul Prashar, Director, Vigyan Prasar was the Chief Guest at this occasion. Dr. Rintu Nath, Scientist F, Vigyan Prasar and Ms. Kathryn Tuccelli, an alumni of Purdue University and Communication Analyst & Content Strategist at OXY, USA, delivered the keynote address. A panel discussion on "Transformation of Communication Media: Print to Screen" was organized at the occasion. Ms. Nishat Nayla, SDG Educator, Bangladesh, Mr. Dustin Wenzel, an alumni of University of Texas at Austin, USA & a Communications Consultant and Mr. Rajeev Bhaskar, Chief Editor (Digital Platform), Punjab Tribune were the panelists. The panel discussion was moderated by Dr. Neelima Jerath. The panel discussion concluded that Science Communication is undergoing great transformation as more and more people are adopting social media/digital platforms, in addition to print media, to share scientific communication. More than 100 participants from leading newspapers, experts from National Council of Science Museums, Heads of various Science Centres pan India, students and teachers of Mass Communication from 10 Universities (Delhi University, Bangalore Institute of Technology Deemed University, Kurukshetra University, Amity University, DAV University, Chitkara University, etc.) and 8 colleges (including Madras Christian College-Chennai, Samvaad School of Media and Culture-Bhubneshwar, HMV and KMV, Jalandhar, etc.) across India, as well as, budding journalists participated.



## Van Mahotsav (July 1-7, 2021)

To create enthusiasm among masses for forest conservation and planting trees as well as, to highlight the crucial role forests play in achieving Sustainable Development Goals, Van Mahotsav is celebrated annually from July 1-7. PGSC organized a webinar on “Role of Microbes in Sustainable Forest Management” on 07.07.2021. Dr. Vipin Parkash, Scientist-F & Officer-in-Charge, Forest Pathology Division & Programme Coordinator (Forestry) from Forest Research Institute (Deemed University), Dehradun was the key speaker. He emphasized that soil microorganisms are important part of forest ecosystem and play an important role in sustainable development of forestry. Competitions like “Plant Native Tree-Species” and “Heritage Tree Contest” were organized. Around 97 entries in “Plant Native Tree-Species” contest and 46 entries in “Heritage Tree Contest” were received from students and general public from all over Punjab.



"A balanced community of microorganisms is extremely important for trees health and play a vital role in converting barren, poor quality land into cultivable land."

**Dr. Vipin Parkash**

Scientist-F, Forest Research Institute, Dehradun

## International Youth Day (August 12, 2021)

International Youth Day (IYD), observed annually on August 12 is an awareness day designated by the United Nations to draw attention to a given set of cultural and legal issues surrounding youth. The first IYD was observed on 12 August, 2000. The theme of International Youth Day 2021 was “Transforming Food Systems: Youth Innovation for Human and Planetary Health”.

Dr. Manoj Kumar Patel, Principal Scientist, CSIR–Central Scientific Instruments Organisation was the key speaker at the event. He has the distinction of being a CSIR Young Scientist awardee and six innovations to his credit at a young age of 33.



"Energy, creativity, enthusiasm, determination, and spirit of youth needs to be strengthened to achieve progress in the field of science & technology."

**Dr. Manoj Kumar Patel, Principal Scientist, CSIR–Central Scientific Instruments Organisation**

## Webinar on 'Science Communication & National Development' (August 14, 2021)

PGSC celebrated Azadi ka Amrit Mahotsav by organizing a webinar on Science Communication and National Development. The event was celebrated to commemorate 75 years of progressive India and the glorious history of its people, culture and achievements. Sh. G.S Rautela, Former DG, National Council of Science Museums was the key speaker at this occasion.

## Engineers Day (September 15, 2021)

Every year on September 15, India along with Sri Lanka and Tanzania celebrate National Engineer's day to recognize and honour the achievements of the great engineer Mokshagundam Visvesvaraya. The day is observed to commemorate the great work of engineers and to encourage them for improvement and innovation. The theme of Engineers Day 2021 was "Engineering for A Healthy Planet". Dr. Mandeep Singh, Associate Professor, Thapar Institute of Engineering & Technology was the key speaker. During his talk, he motivated the students to pursue career in Science Technology, Engineering & Mathematics streams. At this occasion, a presentation on various facilities available at Innovation Hub, PGSC was also shared with the participants.



Dr. Mandeep Singh  
Associate Professor, Thapar Institute  
of Engineering & Technology

Science communication has crucial role of initiating national development efforts by motivating people to embrace science and technology.

Sh. G.S Rautela  
Former DG, National Council  
of Science Museums



## Workshop on Low Cost Teaching Aids

Low Cost Teaching Aids are an effective tool for teaching pedagogy in Science Communication. It helps to understand various complex scientific principles in an easy way. Pushpa Gujral Science City, Kapurthala in collaboration with NCSTC, Department of Science & Technology, Govt. of India organized four workshops on Low Cost teaching Aids for Government school teachers during July 26-31, 2021. One workshop was conducted from September 6, 2021- September 9, 2021. More than 150 teachers from various districts of Punjab participated in these workshops. Sh. Darshan Lal Baweja from Yamuna Nagar, Sh. Sanjay Kapoor from New Delhi and Sh. Rann Singh from Rohtak were the resource persons. The participants were trained to 'make easy to use low cost teaching kits' in classroom which could help in improving conceptual understanding and promoting creativity amongst the students. The participants showed keen interest in the workshop and also, prepared their own low cost teaching kits demonstrating various scientific principles.





# *Independence Day celebration at PGSC*



## International Literacy Day (September 8, 2021)

International Literacy Day is celebrated to highlight the importance of literacy to individuals, communities and societies. The theme of International Literacy Day 2021 was “Literacy for a human-centered recovery, Narrowing the digital divide.” A webinar was organized by PGSC to mark this occasion. **Sh. Arul Jerald Parkash.G, Former Director, Kerala State of Science & Technology Museum & Priyadarshani Planetarium Thiruvananthapuram** was the Key speaker at this occasion. He delivered a special talk on “Role of Science Centres in Scientific Literacy”. **Dr. Avtar Singh Dhindsa, Principal (Retd.), Department of School Education Punjab** delivered a talk on “Scientific Literacy during the Pandemic”. He emphasized the importance of Science Technology Engineering & Mathematics (STEM) education to develop the knowledge, skills and identities needed in the fight against COVID-19 and other global health challenges, climate change and more.



Sh. Arul Jerald Parkash.G, Former Director, Kerala State of Science & Technology Museum & Priyadarshani Planetarium, Thiruvananthapuram



Dr. Avtar Singh Dhindsa, Principal (Retd.), Department of School Education Punjab

## World Ozone Day (September 16, 2021)

To spread awareness among people about the depletion of the Ozone Layer, Pushpa Gujral Science City celebrated World Ozone Day by organizing a webinar on Good Ozone vs Bad Ozone.

**Dr. Umesh Chandra Kulshrestha, Professor and Dean, School of Environmental Science, Jawaharlal Nehru University, New Delhi** was the key speaker at this occasion. He delivered a special talk on 'Good Ozone and Vs Bad Ozone'.



Dr. Umesh Chandra Kulshrestha, Professor and Dean, School of Environmental Science, Jawaharlal Nehru University



## International Day of Older Person - “Free internet training for Older persons” (October 1, 2021)

On 14 December 1990, the United Nations General Assembly designated October 1 as the International Day of Older Persons. The theme for 2021 is “Digital Equity for All Ages” which affirms the need for access and meaningful participation in the digital world by older persons. At this occasion, free internet training was given to 15 women senior citizens from nearby villages .



## World Wildlife Week (October 2-8, 2021)

Pushpa Gujral Science City celebrated Wildlife Week from October 2-8 by organizing two webinars on World Habitat Day (October 4) and Birds at Science City (October 5) which were attended by about 200 students from different educational institutions in the state. Mr. Rakesh Khatri, also known as the **Nest Man of India**, who founded the Eco Roots Foundation, Delhi, was the key speaker during the webinar on World Habitat Day. He has been recognized by the Limca Book of Records for making the maximum number of handmade nests. He delivered a talk on “Save the Sparrows: How to build a nest”. Mr. Khatri informed that the Eco Roots Foundation had initiated a step to save these birds by making handmade birdhouses.

Till date, more than 1,25,000 jute nests and 40,000 tetra-pack nests had been made. Ms. Gitanjali Kanwar, Coordinator, Harike wetland unit of Rivers, Wetland and Water Policy, **WWF, India**, made a presentation of 65 birds surveyed till date on the Science City campus. She emphasized the need to organize nature walks for the students to make them learn about different bird species, their identification, voices, etc. The participants learned how to build bird nests from waste materials at home and key points to hang them appropriately.



Mr. Rakesh Khatri, Founder  
Eco Roots Foundation



Ms. Gitanjali Kanwar, Coordinator, Harike wetland unit  
of Rivers, Wetland and Water Policy, WWF, India

## International Day for Disaster Reduction (October 13, 2021)

The United Nations General Assembly designated October 13 as the International Day for Natural Disaster Reduction as part of its proclamation of the International Decade for Natural Disaster Reduction. The theme for this year celebration was “International cooperation for developing countries to reduce their disaster risk and disaster losses.” Mr. Kunal Satyarthi, IFS, **Joint Secretary to Ministry of Home Affairs, GoI, National Disaster Management Authority, New Delhi** was the key speaker at the webinar organized by PGSC on this day. The day encourages every citizen and government to take part in building more disaster-resilient communities and nations. Mr. Satyarthi emphasized upon making Disaster Management part of educational curriculum at all levels as well as the need to conduct frequent talks, seminars, training programs and live drills for children and youth to combat disasters. He appreciated PGSC's efforts in this direction.



Sh. Kunal Satyarthi, IFS  
Advisor, National Disaster Management  
Authority, GoI

## World Food Day (October 16, 2021)

Science City celebrated World Food Day by organizing a webinar on “Slow Food : Science and Sustainability”. Chef Gunjan Goela, a Celebrity Chef, Food Consultant, researcher and historian on Indian Gastronomy was the key speaker at this occasion. Chef Goela informed that slow food movement in our country is not a new concept and since ages people believed in taking only what is enough to satisfy needs and giving back to the environment. Further, a growing awareness about the positive environmental impacts of vegetarianism is providing a much needed boost to the slow food movement, she added.



"Slow food movement campaign was started in 1989 aimed to prevent the disappearance of local food cultures and traditions, counteract the rise of fast food and fast life and inculcate a sense of responsibility and pride for culinary heritage."

**Chef Gunjan Goela**  
Celebrity Chef, Food Consultant,  
researcher and historian

## Hands-on Workshop on “Make puppets from Trash” (October 29, 2021)

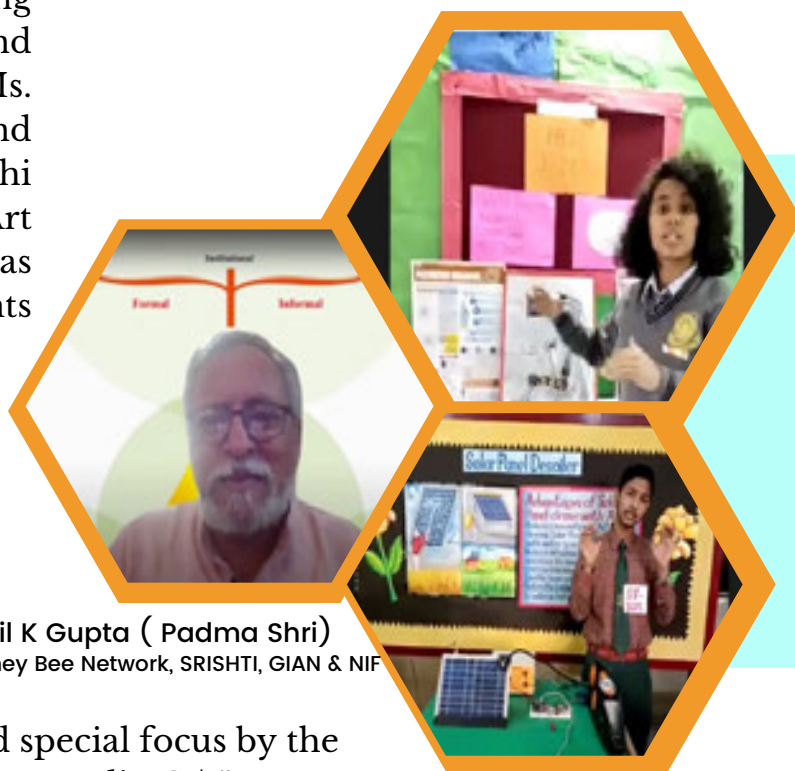
To raise awareness about the global problems that waste generation entails and the direct environmental impact that it produces, PGSC organized a hands-on workshop on 'Making Puppets from Trash'. The workshop demonstrated how to turn accumulated garbage into puppets, while learning about the importance of recycling, and not generating so much waste. Ms. Padmini Rangarajan, Puppeteer and Educational Consultant, Sphoorthi Theatre for Educational Puppetry, Art and Craft – STEPARC, Hyderabad was the resource person. 45 students participated in the workshop.



Ms. Padmini  
Rangarajan  
Educational Consultant, STEPARC,  
Hyderabad

## SCIENCE FEST (NOVEMBER 27, 2021)

Prof Anil K Gupta ( Padma Shri)  
Founder, Honey Bee Network, SRISHTI, GIAN & NIF



Innovation and Creativity is being accorded special focus by the Government during Azadi ka Amrit Mahotsav-India @ 75.

Innovation Hub, Pushpa Gujral Science City, jointly with Grassroots

Innovations Augmentation Network (GIAN) organized Science Fest 2021 to promote innovation and creativity amongst the school students through development of working models in the various fields of Science & Technology. Prof Anil K Gupta ( Padma Shri), **Founder, Honey Bee Network, SRISHTI, GIAN & NIF** during his motivational address to budding scientists said, "Creativity is a function of knowledge, curiosity, imagination and evaluation that leads to innovation. The greater is your knowledge base and level of curiosity, the more potential innovative ideas you can achieve. But simply having knowledge does not guarantee the generation of new ideas or creativity. One needs to be highly innovative and creative to shape their ideas. He stressed that we must give room to the young minds to think independently to get fruitful outcome for the welfare of society."

More than 300 students from different schools of Punjab participated and showcased their interactive innovative models. Cash Prizes were given to the winners.



## FOOD AND NUTRITION SHOW ( NOVEMBER 14, 2021)

The COVID-19 pandemic has brought into focus the importance of good food and nutrition for human health. To take this message to the masses, especially housewives and students, Pushpa Gujral Science City, Kapurthala organized 'FOOD & NUTRITION SHOW' in collaboration with Punjab Agri Export Corporation Ltd. on November 14, 2021 at PGSC campus. Organic farmers from different parts of Punjab exhibited and sold their products during the show. Besides, an Innovative Street Food Competition was organized in which >50 entries were received from students of Hotel Management Colleges/ Institutions/Schools and Housewives. Cash Prizes were awarded to the winners. The recipes were judged based on their taste, nutritional status and innovative recipes and presentation.

**Sh. Mohammad Tayyab, Special Secretary, Expenditure, GoP** was the Chief Guest and **Mr. Ranvir Singh, GM, Punjab Agri Export Corporation Ltd.** was the Guest of Honour. Sh. Mohammad Tayyab said that creating awareness amongst consumers about the benefits of eating healthy and the science behind safe foods would lead to optimum utilisation of resources as well as cultivation and production of better quality food products. Further, agriculture in India was traditionally organic till we switched over to intensive farming using chemical fertilizers and pesticides.

Sh. Ranvir Singh, GM, Punjab Agri Export Corporation Ltd informed that PAGREXCO has created a base of 5,000 farmers with an area of 15,000 acres under organic certification regime where organic food is grown in compliance with Organic standards of National and International standards. Celebrity Chefs, Chef Vishavdeep Bali and Chef Nellu Kaura were the judges of the Innovative Street Food Competition. Dr. Madhu Gill, Consultant Organic, Punjab Agro coordinated from PAGREXCO side.







### World Science Day for peace and development (November 10, 2021)

World Science Day for Peace and Development is an international day that highlights the important role that science has in society and is celebrated each year on November 10. It also highlights the need to engage the wider public in debates on emerging scientific issues. Pushpa Gujral Science City celebrated the day in virtual mode. The theme for World Science Day 2021 was "Building Climate-Ready Communities". Er. Anuj Sinha (Former Scientist 'G' DST, GoI), Chairman of the Board at Network of Organizations for S&T Communication was key speaker at this occasion. The focus of talk was "Science for and with Society".



Er. Anuj Sinha  
Former Scientist 'G', DST, GOI

### World AIDS Day (December 1, 2021)

World AIDS Day, designated on 1 December every year since 1988, is an international day dedicated to raising awareness of the AIDS pandemic caused by the spread of HIV infection and mourning those who have died of the disease. PGSC is creating awareness about AIDS through its AIDS Gallery set up with support of Punjab State AIDS Control Society. since 2009. Sh. Sandeep Mittal, **Deputy Director, Chandigarh State AIDS Control Society** was the resource person at the webinar organized on World AIDS Day. Sh. Mittal spoke on "National AIDS Control Program to combat epidemic of HIV/AIDS - End inequalities, End AIDS". He said, "HIV remains a major public health issue that affects millions of people worldwide. India has made significant progress in recent decades".



Sh. Sandeep Mittal  
Deputy Director, Chandigarh State AIDS  
Control Society



## National Pollution Control Day (December 2, 2021)

National Pollution Control Day is organized every year on 2nd of December in remembrance of people who lost their lives in Bhopal gas disaster. This industrial accident occurred in 1984 when a poisonous gas Methyl Isocyanate got leaked during the intervening night of December 2 and 3 from Union Carbide Pesticide Manufacturing Plant situated at Bhopal, Madhya Pradesh. PGSC organized a webinar at this occasion. Er. Krunesh Garg, Member Secretary, Punjab Pollution Control Board was the key speaker. Er. Garg urged the students especially from rural areas to sensitize their families especially the farming community, not to burn crop stubble which not only damages the soil texture by affecting its fertility but also pollutes the environment and cause harm to human health.



Er. Krunesh Garg  
Member Secretary, Punjab  
Pollution Control Board

## National Energy Conservation Day (December 14, 2021)

National Energy Conservation day, celebrated on December 14 every year is a reminder of India's commitment to clean energy and combating climate change. India celebrated the day under the theme 'Energy Efficient India' under Azadi ka Amrit Mahotsav. Pushpa Gujral Science City, Kapurthala organized 'National Energy Conservation Day' in collaboration with Punjab Energy Development Agency (PEDA) on 14.12.2021 at PGSC campus. Prof. Jaspal Singh Sandhu, Vice Chancellor, Guru Nanak Dev University was the Chief Guest. Model display and Science play were organized on the theme "Save Energy-Save Future".



Strong government support & the increasingly opportune economic situation have pushed India to be one of the top leaders in the world's most attractive renewable energy markets.

Prof. Jaspal Singh Sandhu,  
Vice Chancellor  
Guru Nanak Dev University



## National Mathematics Day (December 22, 2021)

Mathematics is an important skill which promotes logical reasoning and critical thinking. India has been a leader in mathematics since times immemorial. Pushpa Gujral Science City in association with Himachal Pradesh State Council for Science, Technology & Environment (HIMCOSTE), celebrated National Mathematics Day by organizing a virtual tour of Mathematics Gallery followed by hands on interactive session using mathematics tool kits. 300 Students from different schools of Himachal Pradesh participated in the event.

The day was also celebrated in collaboration with Punjab State Council for Science & Technology. A hands-on session on mathematics was organized wherein students learned fundamental concepts and easy method to solve problems regarding areas, volume of different shapes like cylinder, triangle, square, rhombus and rectangle. They also learned various algebra formulas through math kits.



## Webinar on Birth Anniversary of Sir Har Gobind Khorana (January 10, 2022)

A webinar remembering Prof. Har Gobind Khorana, an Indian American biochemist was organized. Prof. Khorana while on the faculty of the University of Wisconsin–Madison, shared the 1968 Nobel Prize for Physiology or Medicine with Marshall W. Nirenberg and Robert W. Holley for research that showed the order of nucleotides in nucleic acids, which carry the genetic code of the cell and control the cell's synthesis of proteins.

Dr. Navneet Agnihotri, HOD, Deptt. of Biochemistry, Panjab University was the resource person. She delivered a lecture on "Modern Science: A legacy of Dr. Har Gobind Khorana".



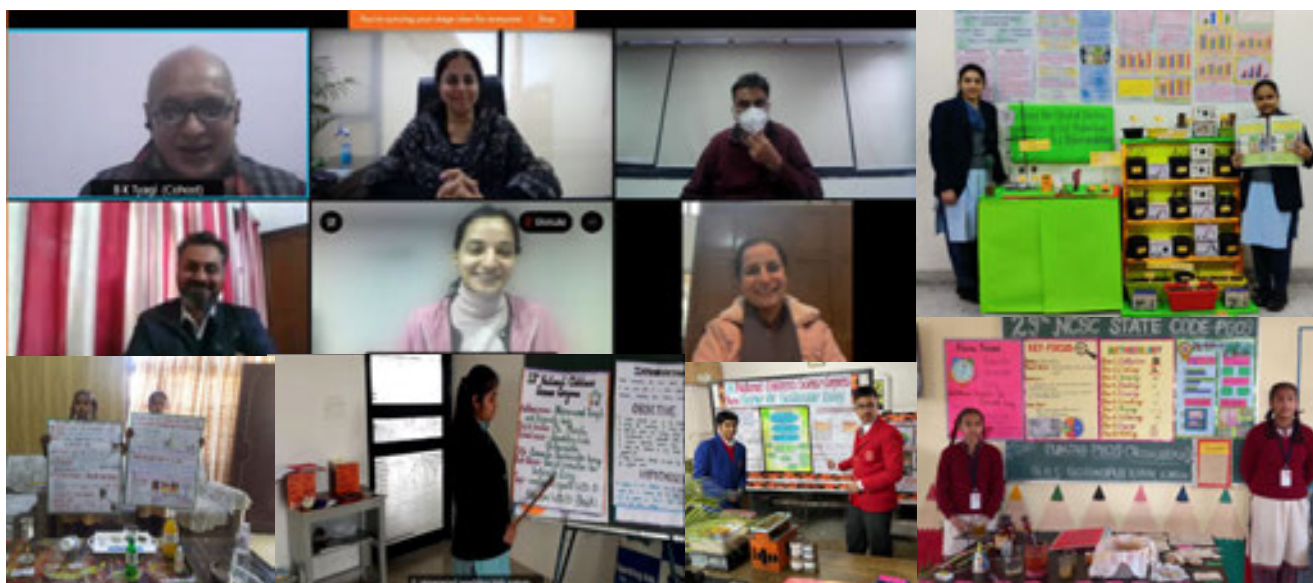
**Dr. Navneet Agnihotri**  
HOD, Deptt. of Biochemistry, Panjab University





## *29th State level Children Science Congress (CSC) organized*

Children's Science Congress is a nationwide Science Communication programme of National Council for Science and Technology Communication (NCSTC), Department of Science and Technology, GoI, which started in the year 1993. 29th State level Children Science Congress (CSC) was organized on-line jointly with PSCST on 11th and 12th January, 2022. Total 135 teams (270 students), teachers and district coordinators from 22 districts of Punjab participated in CSC. 16 teams (8 Junior and 8 Senior) were selected for the National Level Children Science Congress. A One Day Orientation Training Workshop for District Coordinators and Teachers was organized on 6th October, 2021 in online mode. The workshop was inaugurated by Dr. Praveen Arora, Head-NCTSC, DST, GoI and the Special address was delivered by Dr. Jatinder Kaur Arora, Executive Director, PSCST. The experts who conducted the workshop were: Dr. Lalit Sharma, Chairman, National Academic Committee-CSC; Dr. Felix Bast, Associate Professor, Central University, Bathinda; Dr. Yashveer Singh, Assistant Prof., IIT, Ropar; Dr. Jaspreet Kaur, Assistant Prof., Panjab University Chandigarh and Dr. Manmeet Kaur, Associate Prof., PAU, Ludhiana. The Orientation was attended by more than 500 teachers and District Coordinators from all over Punjab. At the State Level, projects were evaluated by a team of experts namely: Dr. Avtar Singh Dhindsa, National Level Evaluator, NCSC; Ms. Rakesh Uppal, Retd. Prof., HMTV College, Jalandhar; Dr. Jaspreet Kaur from Panjab University, Chandigarh; Dr. Avneet Pal Singh from Punjabi University, Patiala; Dr. Deepika Sharma from INST, Mohali & Dr. Kuldeep Kaur Gill from Mata Gujri College, Fatehgarh Sahib. The results of the state level were declared on January 14, 2022. Dr. B.K Tyagi, Senior Scientist, Vigyan Prasar was the Chief Guest and Dr. Jatinder Kaur Arora, Executive Director, Punjab State Council for Science and Technology was the Guest of Honour. The National Level CSC was organized on 15th to 18th February, 2022 in an online mode in which all the 16 projects from Punjab were presented. One project viz. "Social Innovation to repel insects in natural way" by Pranshi Shukla, Govt. Sen. Sec. School, Kot Khalsa, Amritsar was placed among the best projects of National Level CSC-2021.





## 13th and 14th Annual All Breed open Dog show

Science City organized the 13th and 14th Annual All Breed open Dog show with the objective of creating awareness of domesticated biodiversity and the science of evolution which can be most easily understood by common people and children through the example of various dog breeds around us. About 300 dogs from 40 breeds like German Shepherd, Labrador Retriever, Doberman pinscher, American bulldog, mastiff and bullmastiff, boxer, Great Dane, Rottweiler, etc. participated in the event.

A team of Renowned judges Mrs. Olga K Hmelevskaya from Ukraine, Mr. Pradip Ghosh from Kolkata, and Dr. Ankit Chhiber from Kotkapura evaluated dogs during various events. Sh. Dayama Harish Om Parkash, IPS, **Senior Superintendent of Police Kapurthala** was the chief guest at this occasion. During his address, he said that dogs play a very important role in human life. A dog show is a competitive dog sport that involves the presentation of purebred dogs to be judged for conformity to respective breed standards and to determine the best specimens of each dog breed. He highlighted the contribution of Dogs in different fields, like in the detection of explosives, illegal drugs, theft, and various other crimes.



## Webinar on Birth Anniversary of Sir Benjamin Franklin (January 17, 2022)

Sir Benjamin was a major figure in the American Enlightenment and the history of physics for his studies of electricity, and for charting and naming the current still known as the Gulf Stream. As an inventor, he is known for the lightning rod, bifocals, and the Franklin stove, among others. To commemorate his birth anniversary, Science City organized a webinar on "Exploring Depp Space from Space: the Indian Effort". Dr. Jasjeet Bagla, Professor, Physical Sciences, IISER, Mohali was the speaker at this occasion.



## International Women's Day (March 8, 2022)

A Kavi Sammelan on the theme "Naari Dharti aur Vigyaan" with the objective to blend a woman's strength with her softness through a blend of science and literature was organized. Dr. Ajay Sareen, Principal, HMV College Jalandhar was the Chief Guest on this occasion. She said that a woman has to play various roles in her life like mother, homemaker, daughter, an organizer, as well as, a professional.

Empowering them to achieve greater heights in the society is the need of the hour. This can be achieved by including and accepting women's viewpoints in policy making, raising the status of women through education, awareness, literacy and training. Ms. Asha Sharma, Samaj Rattan & Sahitya Academy awardee, Ms. Paramjit Kaur, Punjabi Academy awardee, Dr. Parveen Guleria, HOD Bio-Technology, DAV University, Ms. Maninder Kaur, Principal Education Department from Faridkot and Amarjit Kaur, Renowned Punjabi Poet from Morinda presented their poems in the Kavi Sammelan emphasizing importance of women empowerment.



ਪ੍ਰਭਾਤ ਗਜਰਾਜ ਸਾਹਿਬ ਸਿਟੀ ਦਾਅਵਾ ਆਯੋਜਿਤ



## World Wetlands Day (February 2, 2022)

World Wetlands Day, celebrated annually on 2 February, aims to raise global awareness about the vital role of wetlands for people and planet. This day also marks the date of the adoption of the Convention on Wetlands on 2 February 1971, in the Iranian city of Ramsar. A call to take action for wetlands was the focus of this year's campaign. It was an appeal to invest financial, human and political capital to save the world's wetlands from disappearing and to restore those we have degraded. 2 February 2022 was the first year that World Wetlands Day was observed as a United Nations international day, following its adoption by the General Assembly on 30 August 2021 in a resolution co-sponsored by 75 member states.

A webinar on "Importance of Wetlands for Human Welfare" was organized by PGSC. Prof. C.K. Varshney, Former Dean and Professor Emeritus, School of Environmental Sciences, JNU, New Delhi was the speaker at this occasion.



**Prof. C.K. Varshney**

Former Dean and Professor Emeritus, School of Environmental Sciences, JNU, New Delhi

## World Cancer Day (February 4, 2022)

World Cancer Day is an international day marked on 4 February to raise awareness of cancer and to encourage its prevention, detection, and treatment. PGSC organized a webinar on Cancer Care in India: How much we have achieved? **Dr. Lalit Kumar (Padma Shree Awardee), Head & Professor, Medical Oncology, AIIMS, New Delhi** was the speaker. Dr. Kumar informed the participants about the common cancers in males and females, causative factors and preventable strategies. He said that there has been significant improvement in the outcome, if cancer is detected early. Therefore, having more cancer centres (within 50 to 100 Km reach for easy access), affordable treatment, research on India centric cancers and their causative factors and promoting preventive strategies and healthy life styles are some of key steps in improving the outcome.



**Dr. Lalit Kumar**

Padma Shri Awardee), Head & Professor, Medical Oncology, AIIMS, New Delhi

Pushpa Gujral Science City celebrates

75 Azadi Ka Amrit Mahotsav

PUSHPA GUJRAL SCIENCE CITY The Science of WOW

International Day of  
**WOMEN & GIRLS** in **SCIENCE**

**Chief Guest**

**Dr. Swati Basu**  
FORMER SCIENTIFIC SECRETARY  
Office of PSA, Govt.

**Moderator**

**Dr. Neelima Jerath**  
DIRECTOR GENERAL  
Pushpa Gujral Science City

**Panelists**

**Prof. Manju Bansal**  
INSA Honorary Scientist, Molecular Biophysics  
Unit, Indian Institute of Science, Bangalore  
Former Director, Institute of Bioinformatics  
& Applied Biotechnology, Bangalore

**Dr. Tanusri Saha Dasgupta**  
Senior Professor & Director, S.N. Bose  
National Centre for Basic Sciences,  
Kolkata

**Dr. Sudesh Kaur Khanduja**  
INSA Senior Scientist/Professor, Mathematical  
Sciences, IISER (Mohali); Emeritus Professor,  
Dept. of Mathematics, Panjab University

**A Conversation with Women in STEM**

Platform: ZOOM

**February 11, 2022**  
4 pm - 5.15 pm

Register @ [www.pgsciencecity.org](http://www.pgsciencecity.org)

@PgSciencecity @sciencecitypunjab @sciencecity\_govt @PushpaGujralScienceCity

## International Day for Women & Girls in Science (February 11, 2022)

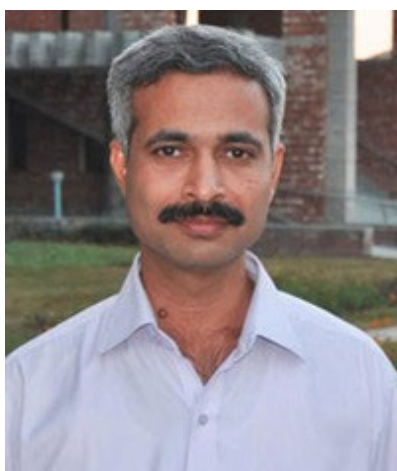
Pushpa Gujral Science City celebrated International Day for Women & Girls in Science by organizing a panel discussion with leading women personalities in STEM – Science, Technology, Engineering and Mathematics – Education, as well as, a two-day lecture series under WISE Vision KIRAN Scheme in collaboration with DST, Government of India. More than 100 girl students and teachers from all over India attended the panel discussion in the afternoon and the lecture series in the morning.

Dr. Swati Basu **Former Scientific Consultant in O/o Principal Scientific Adviser to Govt. in PMO and Former Scientific Secretary, Govt. of India** was the Chief Guest on this occasion. Known as the “Weather Woman” of the country, she is credited with being the first Indian woman to go to the Arctic North. The Panelist at the occasion were luminaries listed in “Lilavati’s Daughters”, i.e. Prof. Manju Bansal, Professor of Theoretical Biophysics, **Indian Institute of Science, Bangalore**; Dr. Tanusri Saha Dasgupta, **Director, S.N. Bose National Centre for Basic Sciences, Kolkata** and Dr. Sudesh Kaur Khanduja, **INSA Sr. Scientist & Professor Mathematical Sciences, IISER Mohali** who shared their success stories. The panel discussion was moderated by Dr. Neelima Jerath, Director General, Science City.



## Birth Anniversary of Charles Darwin (February 12, 2022)

Charles Robert Darwin was an English naturalist, geologist and biologist, best known for his contributions to evolutionary biology. His proposition that all species of life have descended from a common ancestor is now widely accepted and considered a fundamental concept in science. To commemorate his birth anniversary, an online talk on “**The Story of the Spotted Camel**” was organized by PGSC. Dr. N.G. Prasad, **Professor and Dean, Biological Sciences, IISER, Mohali** was the key speaker. The beautiful diversity of life that we see around us is a result of billions of years of evolution. While the idea of evolution has been around for a long time, the genius of Charles Darwin and Alfred Russel Wallace was in coming up with a description of how evolution actually happens. While quite often evolution is portrayed as a process that gives rise to perfect organisms, the truth is far from it. The elegant process of evolution can lead to beautiful, high functioning but badly designed organisms. Dr. Prasad's talk focussed on how this happens using one of Darwin's own examples- the case of the spotted camel.



**Dr. N.G. Prasad**  
Professor and Dean, Biological Sciences, IISER, Mohali

## National Science Day (February 28, 2022)

National Science Day marks the discovery of the Raman effect by Indian physicist Sir C. V. Raman on 28 February 1928. At this occasion, Dr. A.K. Ganguli, **Dy. Director (Strategy & Planning) IIT, New Delhi & Founding Director, INST** delivered a talk on “STI impacting day-to-day life”. Dr. Ganguli in his talk highlighted the role of Science, Technology and Innovation in the growth of National Economy. 'Best out of Waste' competition was also organized at this occasion.



**Dr. A.K. Ganguli**  
Dy. Director (Strategy & Planning) IIT, New Delhi & Founding Director, INST



## International Day of Action for Rivers (March 14, 2022)

International Day of Action for Rivers is celebrated to highlight the importance of actions required to conserve and sustain rivers. This year the theme of International Day of Action for Rivers was 'Rights of Rivers'. At this occasion a webinar was organized. Dr. R.P Pandey Scientist G & Head, Environmental Hydrology Division, National Institute of Hydrology, Roorkee was the key speaker at this occasion. He delivered a lecture on "River Health Assessment and Rejuvenation". During his address he said that the River is an aquatic ecosystem where a number of abiotic and biotic factors keep interacting and maintain an equilibrium over a period of time. India faces greater annual/intra-annual variability of rainfall both in space and time with highly skewed seasonality in rainfall. Around 100 students and teachers from all over Punjab attended the webinar.



**Dr. R.P Pandey**

Scientist G & Head, Environmental Hydrology Division, National Institute of Hydrology, Roorkee

## World Sparrow Day (March 21, 2022)

World Sparrow Day is a day designated to raise awareness of the house sparrow and then other common birds to urban environments, and of threats to their populations, observed on 20 March. It is an international initiative by the Nature Forever Society of India in collaboration with the Eco-Sys Action Foundation (France) and numerous other national and international organisations across the world. At this occasion, PGSC organized a bird watching activity at its campus for its staff and their families. Science City is a green campus with more than 5500 plants belonging to 168 species from 144 Genera and 58 Families. A bird survey was conducted and 46 species of birds were recorded on the campus in one season. Ms. Gitanjali Kanwar, Coordinator – Rivers, Wetlands and Water Policy, WWF-India was the resource person.



Ms. Gitanjali Kanwar with PGSC staff while Birdwatching



## Innotech 2022

Science City celebrated its 17th annual day by organizing Inno-tech 2022 to promote innovation and creativity amongst the youth through development of working models in various fields of Science & Technology. More than 75 students from different Engineering and Polytechnic colleges of Punjab presented their innovative models through virtual mode. Dr. Vikas Handa, TIET Patiala delivered an expert talk at the occasion and shared inspiring success stories of the young innovators and motivated participants to adopt innovation as a way of life. He urged students to continually expand one's knowledge base and understand the things happening around and think over to make necessary changes in order to bring fruitful outcomes for the welfare of society.

## World Forestry Day (March 21, 2022)

The UN General Assembly proclaimed 21 March as the International Day of Forests in 2012. The Day celebrates and raises awareness of the importance of all types of forests. An online talk on "Himalayan Ecosystem - Floristic diversity, Ecosystem Services and Impact of Climate Change" was organized by PGSC. Dr. S. S. Samant, Director, Himalayan Forest Research Institute Shimla, Himachal Pradesh was the resource person.



A participant presenting his project in Innotech 2022

## World Water Day (March 22, 2022)

World Water Day celebrates water and raises awareness of the 2.2 billion people living without access to safe water. It is about taking action to tackle the global water crisis. This 2022, the focus was groundwater, an invisible resource with an impact visible everywhere. **Baba Sewa Singh (Padma Shree) Social Worker & Environmentalist** was the Chief Guest at this occasion. A Slogan Writing and Water Audit competition was also organized.



Baba Sewa Singh Ji giving away the prizes

# Science Trainings, Camps & Workshops



## **Learn Advanced Excel (31.5.22 - 1.6.21)**

The training covered excel basics, formulas, essentials, Data analysis, charting, pivot table, etc.

## **Model Rocketry (02.06.2021 -03.06.2021)**

The topics covered in this training were: Introduction to rocketry, Basic model Rocketry Building and the science of Model Rocketry.

## **Super Fun: Kids Science Experiments (04.06.2021-05.06.2021)**

In this training, easy science experiments that can be done at home, with everyday household items were demonstrated .

## **World of Microorganism (06.06.2021-07.06.2021)**

Microscopic organisms, commonly known as microorganisms or microbes, are found all around us and even inside our bodies. During the training the participants explored some major divisions within microorganisms, and highlighted some interesting facts and differences within each group.

## **Fun with Accelerometer, Sensors using Arduino (08.06.2021-09.06.2021)**

During the training the students learnt about Arduino Interfacing with Accelerometer Sensor.

## **Science behind Miracles (10.06.2021-11.06.2021)**

The training was organized with the objective to inculcate scientific temper, develop rational thinking, and dispel prevailing superstitions in our day to day life so as to develop a knowledge based society.





### **Basics of AutoCAD Designing (12.06.2021-14.06.2021)**

The Training aimed at providing an insight to the basics of design and modeling of the machine component in 3- d view, co-ordinate system, basic design tools, 3-d design tools, creating parts, provide dimensions & features to the parts and finally assembling of the parts. The highlights of the training were: Introduction to Auto cad, Basic design tools, 3-D Design tools, Operating coordinate systems, Basic 3-d design, Creating parts, Dimensioning, Assembling of the parts and Design sheet.

### **Artificial Intelligence (15.06.2021-16.06.2021)**

Artificial intelligence is a technology that is already impacting how users interact with, and are affected by the Internet. In the near future, its impact is likely to only continue to grow. The participants learned How Artificial Intelligence Works & How It Is Used. The training covered all the basics of the technology behind AI, key considerations and challenges surrounding the technology,

### **Deadliest Human Viruses (17.06.2021-18.06.2021)**



The participants were introduced to some of the deadliest viruses, how they were first discovered and how they are detected, detailed steps of viral replication and how vaccines are used in prevention and treatment of viral diseases.



### **Amazing Candle Science (19.06.2021- 20.06.2021)**

During the training interesting experiments like, Oxygen Required For Burning, Rise in water, Crushing of Bottles, Which candle goes off First?, Candle burning under water in Bowl, Air convection, Light candle by smoke, See Saw, etc were taken up.

### **Nature Camp (21.06.2021-24.06.2021 and 26.07.21- 29.07.21)**

The training covered topics like, Ecology and ecosystem, energy flow and ecosystem, Natural resources and their conservation, nutrient cycle, Environmental Pollution (air, water, soil, etc.), Global Environmental Issues, Biodiversity and its conservation, solid waste management, Sustainable development, environmental impact assessment, environment, constitution of India and Environmental Laws.

### **Science Toys Making Workshop (25.06.2021-26.06.2021)**

The participants were demonstrated exciting science experiments and toys that can be easily made at home.



### **Food Adulteration Workshop (27.06.2021-28.06.2021)**

The aim of the workshop was to raise awareness about food adulteration. The participants were demonstrated how to find the contaminants and harmful content in the edibles with simple tests at home.

### **Low Cost Teaching Aids (July 3-4, 2021)**

The workshop focused on 'Learning by Doing'. The participants were demonstrated preparation of 'low cost, no cost science material'.

### **3 D Modelling and Printing (July 5-6, 2021)**

3D Printing is an Additive Manufacturing technique that creates a physical object from a virtual 3D CAD model by depositing successive layers of material. They work like the traditional inkjet printers, but instead of ink, a 3D printer deposits desired material to manufacture an object from its digital format. This program on 3D Printing helps the participants understand the design, functioning and operation of a basic 3D Printer.

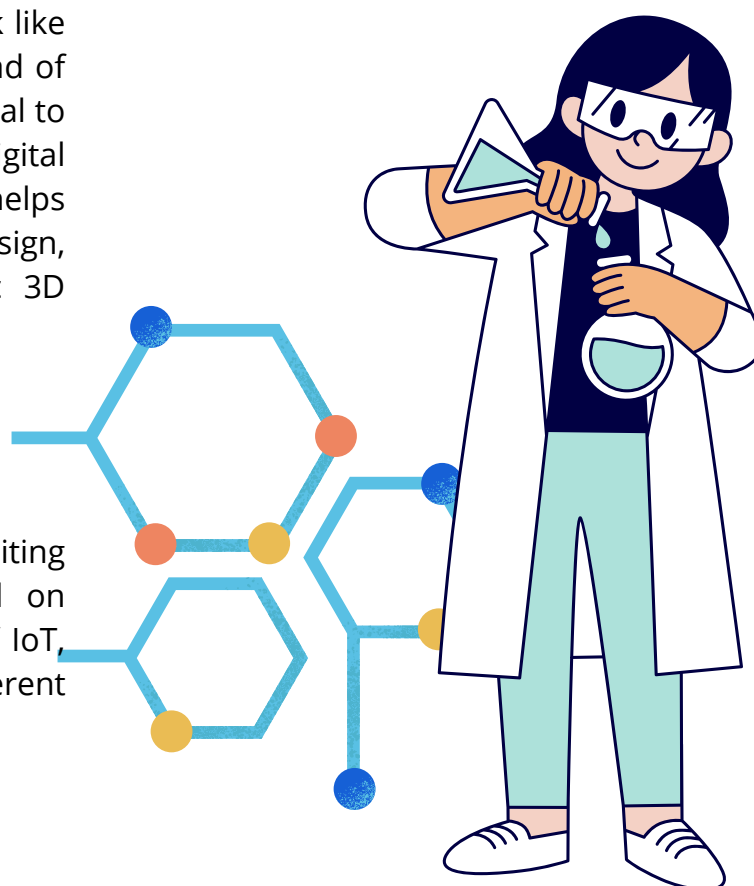
### **Internet of Things (July 7-8, 2021)**

The participants were introduced to exciting world of IoT. The workshop focused on understating IoT Technology, History of IoT, its applications, IoT Standards and different requirements for implementation.

### **Exploring the Night Sky with Telescopes (July 9-10, 2021)**



The training programme highlighted the identification of the different planets in the solar system, like Mercury, Venus, Mars, Jupiter, Saturn. The participants learned how telescope optics work, and were introduced to the features present in modern telescopes and how these aid in finding and viewing objects in the night sky.



# From the Innovation Hub

The Innovation Hub, PGSC has been created by National Council of Science Museums in association with National Innovation Council engages youth in innovative and creative activities. It serves as a springboard for new ideas and innovation and thus, helps the society to face future challenges and meet rising aspirations of the growing population. Innovation Hub at PGSC has been set up in 500 sq. m area . Discovery Hall, Innovation Resource Centre & Hall of Fame, Idea Lab and Design Studio are just a few of the engaging facilities available at the Innovation Hub to promote logical thinking, showcase innovative ideas and pursue creative activities.

The Tod-Phod-Jod (Break & Remake) Corner and Kabaad Se Jugaad (Build from scraps) are other interesting features of this hub. Membership is encouraged and mentoring facilities are provided for idea concretization, seeding proof of concept and protection of Intellectual Property. Ideas with commercialization potential can be taken further through angel investors and arranging venture capital.

## **Workshop on Arduino Micro Controller (July 1-2, 2021 & January 31, 2022)**

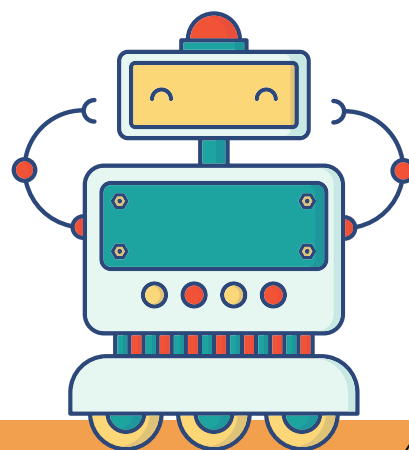
The participants learned what an Arduino is and how it works? They were familiarized with various development boards of Arduino and learnt the development environment for Arduino. Working with Arduino I/ O pin was taught and functions of various embedded components were explained. Application of Arduino like blinking LED and its coding was also explained. The participants got to know how to use an Arduino with various electronic sensors like LDR and Ultrasonic sensors in project development.

## **Workshop on Automate your home (July 11 & 12, 2021)**

The participants learned about designing of electronic automation based circuits like automatic switching on/off of lights using PIR & LDR sensor. Students developed their own sensor based circuits through online circuit designing software.

## **Workshop on Robotics and its application ( July 31, 2021)**

The participants learned fundamental concept of Robotics & practical application. In the first session students got familiar with the term Robot, how to identify whether a machine is a Robot or an autonomous bot. Informative videos of Various Robots were shown to students. Live demo on making the "Obstacle detecting Robot" was made. Explanation about connections of motor drivers L293D to Arduino and motors of Robot chassis was also explained.





### Workshop on Food adulteration (August 12, 2021)

The participants were demonstrated various techniques to check adulteration in various food items like honey, milk, desi ghee, red chilli, tea, etc. that are commonly used in homes.

### Workshop on Shadow art (August 30 - September 1, 2021)

A three-day workshop on Shadow art was organized. Sh. Subhasis Guha Neogi (**Nek Chand Excellence Awardee**), President PNA-The Puppet Theatre, Chandigarh, was the resource person. The workshop was attended by 41 students. The participants explored different types of lights & shadows with 2-D and 3-D paper cut outs and shadow puppets. They also created various puppets like dinosaurs, butterflies, buildings, etc.



Sh. Subhasis Guha Neogi  
(Nek Chand Excellence Awardee)



### Workshop on Electronic circuit designing (Sep 27, 2021 & Feb 18, 2022)

The participants were introduced to basic electronics and working of components like transistor, capacitor and relay modules. Circuit designing using software and soldering techniques were demonstrated during the workshop.



### Workshop on Electronics Automation (October 16, 2021)

The workshop was organized for students of KMV College, Jalandhar. The students learned designing of electronics automation circuits like automatic switching on/off of lights using Infrared & LDR sensor. Students developed their own sensor based circuits through circuit designing software. Seven students participated in the workshop.

### Workshop on Ideation & Creation (October 26, 2021)

The workshop was organized for students of KMV College, Jalandhar. The students learned about various processes involved in creation of idea to its development. They also discussed their innovative ideas and were given suggestions regarding further development of their ideas. Eight students participated in the workshop.

### Workshop on Wireless electronics (November 22, 2021)

The students learned about encoders and decoders used in wireless connectivity using RF transmitter and receiver. They designed wireless circuits on their own and learned how to control devices through RF module. The workshop was organized for KV-II Kapurthala. Eight students participated.

### **Workshop on assembling of Robot (December 1, 2021)**

Hands on session on Assembling of simple Dig detector robot was organized. The participants learned techniques to assemble a robot. They also learned various parts used in making a robot.

### **Workshop on Robotics and its programming (December 2, 2021 & January 28, 2022)**

In this workshop, the students learned the basic structure of robot. They got opportunity to assemble an obstacle detector robot using ultra sonic sensor through interactive kits. In the programming session, students learned basic coding technique for obstacle detection in robots.



### **Workshop on Coding Techniques (12.02.22)**

The students learned coding technique to program a robot under the guidance of expert. They learned how to operate and program the robot.

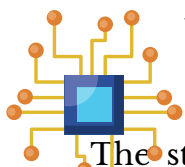
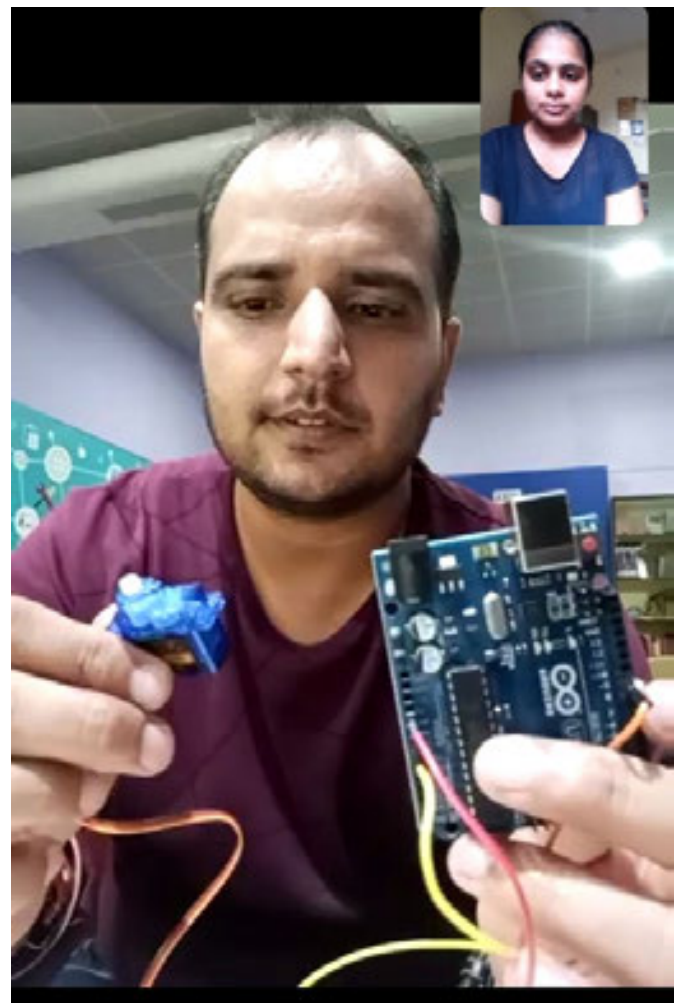
### **Workshop on Smart sensors**

**(December 12, 2021 & January 22, 2022)**

The participants were introduced to smart sensors. Students learned working of various sensors like LDR, IR, temperature sensor and their interfacing with micro controller. They made virtual circuits using sensors on a computer software.

### **Lets make obstacle detector robot (December 13, 2021)**

Students made Obstacle detector robot. They learned how to operate and program the robot. 25 students from Lord Krishna School, Sultanpur participated in the workshop.



### **Workshop on Basic Electronics (December 18, 2021)**

The students learned working of various electronic components like transistors, capacitors, diodes, resistances, relays etc. An introduction to circuit designing was also given to the participants. They made simple circuits like AC to DC converter on their own.

# Women Technology Park

'Empowerment of Rural Women through Science based skill development' is an initiative taken by PUSHPA GUJRAL SCIENCE CITY in collaboration with SEED Division, Department of Science & Technology, GoI to empower the women in rural areas. The project aims at ensuring that the benefits of science and technology percolate to rural women of the surrounding villages and provide them skill training and incubation facility to earn their own livelihood in a dignified manner. Started in 2020, the project offers long term and short term training to the rural women in *Pleurotus sajor caju* Cultivation, Preparation of Cow Dung Logs & Pots and Value Addition to textiles (Hand Block Printing and Computer Assisted Embroidery).

## Major Activities undertaken:

- 106 women trained in Mushroom cultivation (with special focus on Dhingri)
- 33 women trained in preparation of cow dung logs and pots.
- 60 women trained in Block printing and computer aided embroidery.
- 23 Orientation cum Awareness programmes on Livelihood generation organized in different villages. 460 women participated.

## Other Activities:

- Awareness programmes on 'How to Boost Immunity in COVID times' organized on 1/6/2021 and 15/6/21.
- Vaccine awareness programme organized on 26/6/21.
- Creatives on vaccine awareness developed and circulated among the beneficiaries.
- Testing of Cow Dung logs for calorific value, CO<sub>2</sub>, CO, O<sub>2</sub>, SPM, Florate of smoke volume, PM10 level, etc.

## Exhibitions/shows:

- Farmers Mela organized by Krishi Vigyan Kendra, Kapurthala on September 1, 2021.
- Food and Nutrition show organized by Pushpa Gujral Science City on November 14, 2022.
- International Women's Day celebration by Manav Vikas Sansthan on March 8, 2022.



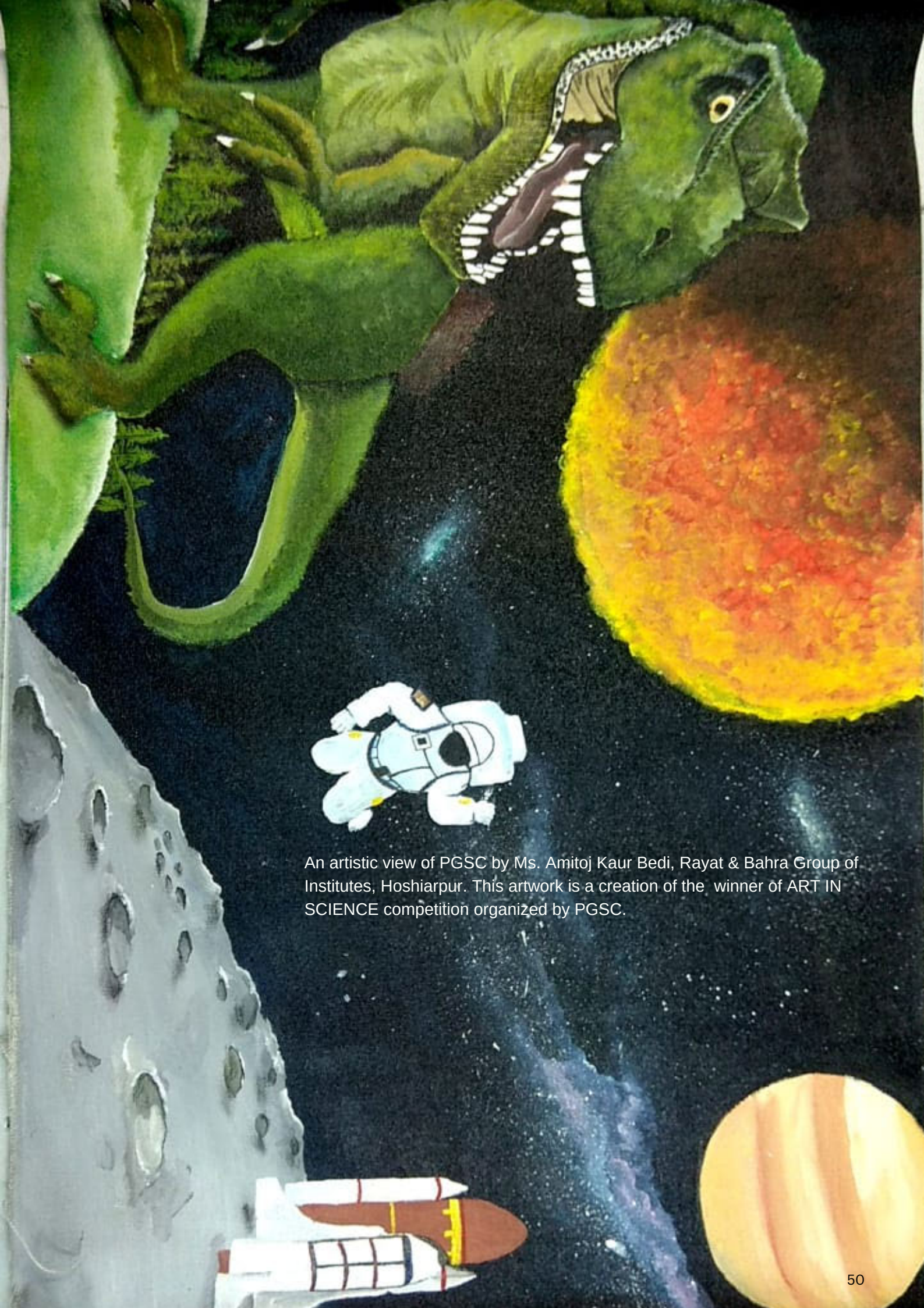
## Impact of WTP Trainings

Total women trained under WTP are as follows:

- 203 women in Dhingri Cultivation ( of these 62 are Krishi sakhis nominated by the DRDP, Punjab). The Deptt. has informed that all the krishi sakhis trained under WTP have been growing Dhingri and earning livelihood. These Krishi Sakhis are also further training over women in their villages. The success story of Krishi Sakhis trained under WTP was published in Dainik Bhaskar on January 17, 2022.
- 147 women have been trained in Cow Dung Logs and Pots.
- 89 trained in Block printing. The WTP, PGSC collaborated with Manav Rachna Sansthan, an NGO which is also training women under the Sunehra Kal scheme of ITC. Three women trained in block printing are preparing and selling their products.

The videos of success stories of Krishi Sakhis and women trained in Block printing has also been recorded and shared with DST. PGSC has also recorded a video of WTP for DST.





An artistic view of PGSC by Ms. Amitoj Kaur Bedi, Rayat & Bahra Group of Institutes, Hoshiarpur. This artwork is a creation of the winner of ART IN SCIENCE competition organized by PGSC.



# Other Activities

## WEBINARS/CONFERENCES/MEETINGS

### DG PGSC as special invitee:

- Guest of Honour and Keynote Speaker at "International Conference on Plant Biodiversity and Environment Conservation" organized by HMV College, Jalandhar on 20.05.2021.
- Keynote Speaker at webinar on "Challenges in Biodiversity Conservation" organized by Haryana Biodiversity Board on 21.05.2021.
- Member of Jury of India Biodiversity Awards at National celebration of "International Biodiversity Day – We are part of the solution" organized by MoEFCC, Gol and National Biodiversity Authority (NBA) on 22.05.2021.
- Keynote speaker at 'Azadi ka Amrit Mohotsav' program on "Wonderful Wetlands-Punjab da Amrit". She spoke on "A journey of Ramsar Site Wetlands of Punjab" on 15.06.2021.
- Chief Guest at Inaugural program of DYAU Science Communication, Delhi on 18.07.2021.
- Technical Expert for Write-shop on Biological Diversity Act, 2002" organized by UNDP, India in partnership with National Biodiversity Authority on 13.08.2021 & 14.08.2021.
- Invited as expert for the meeting on "Global Environment Facility (GEF): Food Systems, Land Use and Restoration (FOLUR) Impact Program" under the chairmanship of Commissioner Agriculture, Department of Agriculture & Farmers Welfare, Punjab on 19.07.2021.
- Invited by National Biodiversity Authority (NBA) as Expert member in the NBA Brainstorming Session on 22.07.2021.
- Invited by MoEFCC, Govt. of India as special invitee in Working committee meeting to support OECMs (Other Effective Area based Conservation Measures) on 30.07.2021.
- Technical Expert member in North East India Biodiversity and Culture, an initiative of UNDP, India and MoEFCC, Gol on 06.08.2021.
- Training on Environmental Safeguards on World Bank sponsored Surface Water Supply projects organized for senior officers of Department of Water Supply and Sanitation by DG, PGSC (in her capacity as Adviser, DWSS WB Projects) on 07.08.2021.
- Keynote talk on "Single use plastic and Its Management: some case studies" was delivered by DG, PGSC on 21.10.2021 at the event on "Ban on Single Use Plastic" organized by PPCB. Director, PGSC also attended.
- Expert in Biodiversity Samrakshan Program of NBA and attended Session on "People's Biodiversity Registers & e-PBRs" on 18.01.2022.
- Expert Talk at brainstorming meeting on "Engaging Corporate Sector in Conservation and Access & Benefit Sharing of Biological Resources" organized by United Nations Development Programme (UNDP), Ministry of Environment, Forest and Climate Change and National Biodiversity Authority on 26.11.2021.
- Chief Guest at Inaugural Program of "Science Week Festival" at Hans Raj Mahila Maha Vidyalaya, Jalandhar on 22.02.2022 organized under Vigyan Sarvatra Pujyate' a program by Vigyan Prasar supported by DST-Gol.
- Chief Guest at Valedictory Program of "Science Week Festival" at Punjabi University, Patiala on 28.02.2022 organized under 'Vigyan Sarvatra Pujyate'.

### Meetings attended by DG, PGSC as an expert / special invitee

- World Bank Mission meetings of DWSS on 19.05.2021 and 24.05.2021.
- National Biodiversity Authority meeting on 31.05.2021 as member of National Committee on PBR Evaluation constituted by NBA and MoEFCC as per orders of National Green Tribunal.

- DG, PGSC was invited by UNDP to be a member of the Technical Advisory Group on strengthening 'NE India Community Conservation Initiatives' launched by MoEFCC, Gol. The first brainstorming session was attended on 12.06.2021.
- Nominated as Member of Biodiversity Samrakshan Internship Program by National Biodiversity Authority (NBA) (05.07.2021).
- Consultative meeting of India Biodiversity Awards on 06.07.2021 as Member of Committee.
- Nominated by UNDP as Member of Technical Advisory Group of NE India Conservation initiative for review of proposals- 23.07.2021.
- 32nd Governing Council Meeting of SSS National Institute of Bio-Energy on 24.07.2021 as representative of PS,STE.
- Expert member by MoEFCC, National Biodiversity Authority as per NGT orders in National Committee for PBR evaluation. She participated in the 5th meeting of Expert Committee on 15.09.2021.
- DG, PGSC is member of Committee of "Gorakhpur Environment Action Group" which is assisting DST, Govt. of India in setting up COVID Resource Centres in rural areas. A meeting of the Committee was attended on 19.09.2021.
- Nominated as Senior Environment Specialist by DWSS for World Bank Projects. She participated in field training on Environment and Social aspects at Nanowal, District Fatehgarh Sahib on 07.09.2021.
- Nominated as member of Expert Committee of WOS-B: Kiran Division of DST, Gol for review of Agricultural and Allied Science projects. She participated in the Project evaluation Expert committee meeting on 30.09.2021.
- Member of Expert Committee of DST-Gol (WOS-B: Kiran Program) for review of applied research projects on Agricultural, Environment and Allied Science. She participated in the Project evaluation Expert committee meeting on 01.10.2021.
- Nominated as an expert by National Biodiversity Authority for the BSIP Internship Selection held on 13.11.2021.
- 22nd meeting of Board of Governor of Punjab ICT Education Society (PICTES) under the chairmanship of Worthy Chief Secretary, Punjab on 11.10.2021 was attended by DG, PGSC.
- Meeting of "Science Communication, Popularization and its Extension" (SCoPE) in Indian languages organized by Vigyan Prasar on 20.10.2021 at New Delhi.
- As Member of the Expert Committee constituted as per orders of NGT by National Biodiversity Authority, MoEFCC, attended the Monitoring Committee meeting and field visit at Haryana from 25.10.2021 to 27.10.2021.

#### **Webinars attended by DG PGSC & other staff**

- "Gombe and beyond" talk by legendary Dr. Jane Goodall for her work on Wild Life and Conservation organized by International Union Biological Sciences on 27.04.2021.
- "Building Confidences on COVID vaccine" organized by National Academy of Sciences, India on 29.04.2021. Lead talk by Dr. Randeep Gularia, Director, AIMS at panel discussion under science and society program.
- "Harnessing Agro Biodiversity for Food and Nutrition" organized by NABI on 25.05.2021.
- Asian Pacific Regional Technical Meeting on ESD for 2030 organized by UNESCO, Bangkok on 27.05.2021.
- AGENDA 2021 Economics of Bio-diversity: Practical significance of the Dasgupta, Economic Review" organized by MoEFCC, Gol on 24.06.2021.
- 'Microsoft Future Ready: Shaping a human-powered growth journey' virtual seminar on 11.01.2022 .
- Conclave on "SDG-4 Quality Education" organized by Sustainable Development Goal Coordination Committee (SDGCC), UNDP and Department of Planning, Punjab on 16.11.2021 – attended by DG and DGM.
- Conclave on "SDG-13 Climate Action" organized by Sustainable Development Goal Coordination Committee (SDGCC), UNDP and Department of Planning, Punjab on 17.11.2021 – attended by DG and DGM.



- National level program under "Azadi ka Amrut Mahotsav" organized by SEED, DST, Gol on 21.09.2021 which included talks by Director, NIPER, Hyderabad and Dr. Pragati Ghokhale, Advisor Rajiv Gandhi Science & Technology Commission on Mera Mobile Mera Marketing --usage of www.marketmirchi.com to promote rural digital market – attended by DG and Scientist B.
  - Webinar on "Museums – COVID 19 Crisis, Challenges and Responses" on 18.05.2021 - attended by Director.
  - Webinar on "Climate Change and Sparrow Conservation" by Mr. Rakesh Khatri, Nest Man of India organized by MRIS, Mohali on 17.07.2021 – attended by DGM, Scientist 'D' and Scientist 'B'.
  - International Conference on Maternal Mental Health catalysed & supported by DST, Gol-SEED Division on 08.09.2021 2021 – attended by Scientist 'B'.
  - Expert Committee Meeting on Establishment of Community COVID Resilience Resource Centres (CCRRCs) organized by DST, Gol on 19.08.2021 – attended by DG and Scientist 'B'.
  - "Vigyan Utsav" on 04.02.2022 organized by Punjab State Council for Science & Technology under State Science Technology Program supported by DST, Gol. Science City presented on "Wonder of Science".
  - "Reimagining Museums in India – A Global Summit" organized by the Ministry of Culture, Gol on 15.02.2022 and 16.02.2022 – attended by DG, PGSC.
- Trainings/Workshops:**
- Online Training program on "Child Centric Disaster Risk Reduction" organized by MGSIPA in collaboration with NIDM, Ministry of Home Affair, Gol from 28.04.2021 to 30.04.2021. Attended by Scientist-D, Scientist-B, MMS &DEO.
  - National level Workshop on "Solid Waste Management" organized by Rotary on 23.07.2021 – attended by DG, Director, DGM and Scientist 'D'.
  - Training on "Fundamentals of Digital Marketing Using Social Media Platforms" organized by C-DAC, Mohali from 09.08.2021 to 19.08.2021 – attended by DGM, Scientist 'D', Scientist 'B', SRF and Technical Assistant
  - Training on 'Sustainable Development Goal' organized by UNDP-SDG Coordination Centre at MGSIPA on 02.09.2021 and 03.09.2021 – attended by DGM.
  - Brainstorming Meet to discuss the concept and execution of the Post COVID Resilience Measures through Women Technology Parks & Other Projects organized by DST, Gol on 18.06.2021 – Attended by DG, PGSC and Scientist B.
  - Brainstorming session on "Integration of NBA Electronic Dashboard on BMC and PBR with NICs Gram Manchitra for effective conservation" organized by National Biodiversity Authority on 05.07.2021. Attended by DG, PGSC.

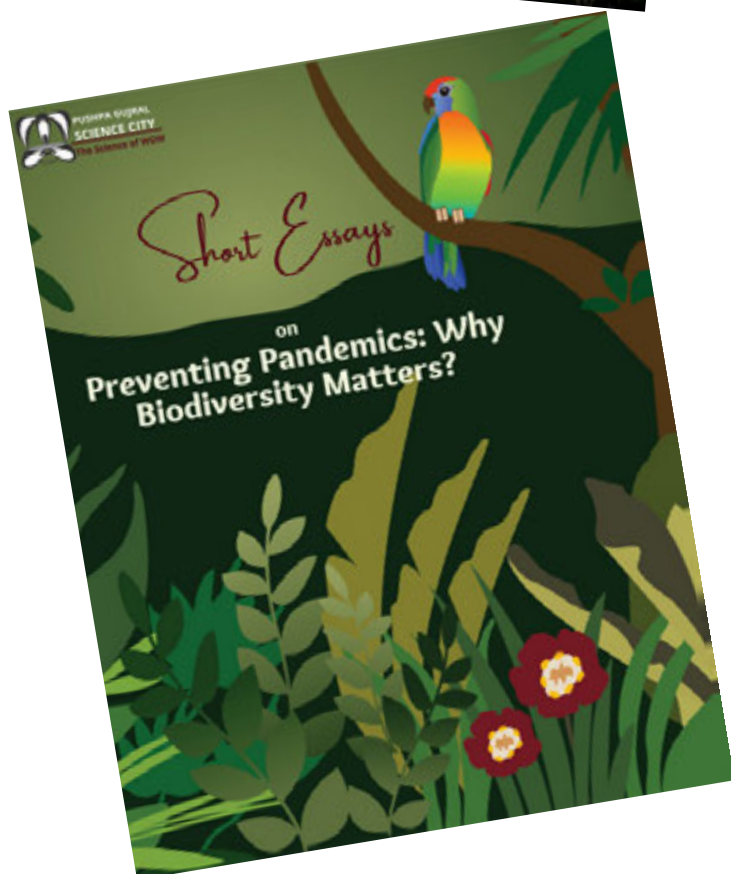
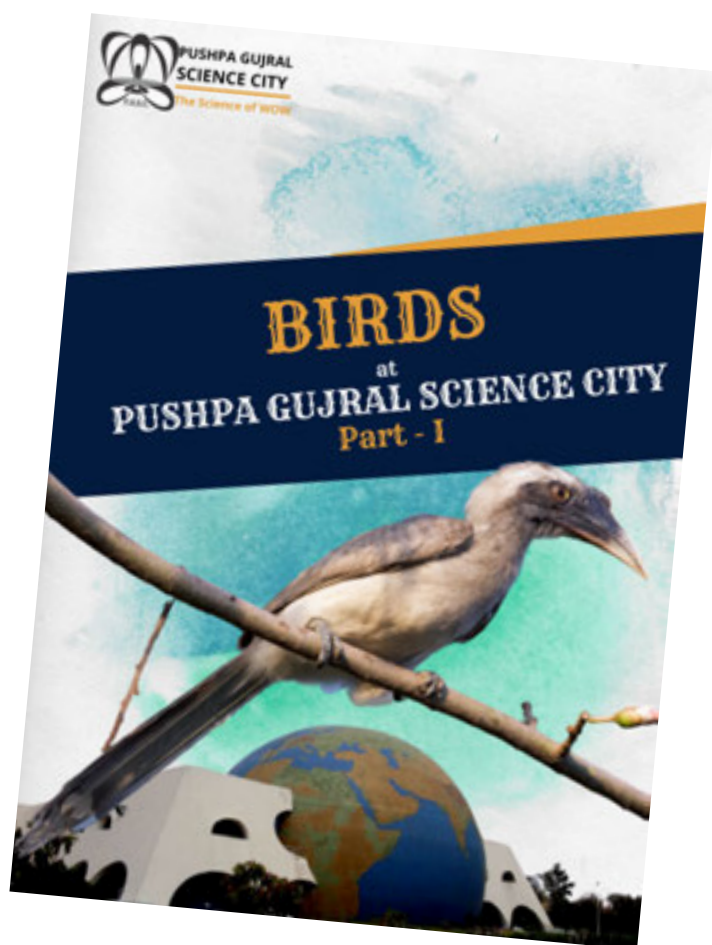
## Media Achievements

- Interview of DG, PGSC broadcasted on AIR Jalandhar in Bal Jagat Program on 27.06.2021.
- Interview of DG, PGSC on "Challenges of Environment in ensuring potable water availability to general population was recorded on 28.06.2021 for public telecasting.
- Interview of PRO on Science City broadcasted on AIR Bathinda on 30.08.2021.
- Live Interview of Director, PGSC on Science City telecast on DD Jalandhar on 13.09.2021.
- Radio interviews of DG, PGSC were broadcast on 10.11.2021 at 'World Day for Science & Peace' by Air Jalandhar (in "Vasde Vehre" program), FM 102.7 Jalandhar and FM 103.6 Amritsar.

Besides, all the events organized by PGSC were widely covered by print, electronic and social media.

## Papers/Books/newsletter/reports

- Pathak, R, Grover, R and Jerath, Neelima. 2021. "Science Popularisation during COVID-19 Pandemic: Participants Perspective on e-learning" published in Journal of Scientific Temper published by National Institute of Science Communication and Information Resources (NISCAIR), CSIR.
- Grover, R, Batish S and Brar, Loveleen. 2021. 'Mobile Science Exhibition: An Impact Assessment study' published in The Journal of Scientific Temper, JST Vol.09 (1-2).
- Brar, Loveleen, Bhalla, B.S, Grover Rajesh and Jerath Neelima. 2021. e-book on "Short Essays on Preventing Pandemic". Published by PGSC.
- Brar, Loveleen, Kanwar, Gitanjali, Bhalla, B.S, Grover,R, and Jerath, Neelima. 2021. e-book on "Birds at Pushpa Gujral Science City-Part I". Published by PGSC.
- Brar, Loveleen. 2021. Article on 'Indian Women in Science' published in May-June, 2021 issue of "Sasthra" - The Indian Journal of Science and Technology.
- 'Buzzer': The Quarterly e-newsletters of PGSC.



# Financial Statement

## Income during the year 2021-22 (Amount in Lakh)

Items	Income ( in Lakh)
Operational Receipts	349.83
Other Receipts	641.04
<b>Total</b>	<b>990.87</b>

## Expenditure during the year 2021-22 (Amount in Lakh)

Item	Expenditure (in lakh)
Operating & Running Exp.	190.77
Administrative Exp.	12.61
Personnel Exp.	506.46
Depreciation	178.05
<b>Total</b>	<b>887.89</b>







The gallery supports interactive learning and would be

These were the views expressed by the Minister while Inaugurating the "Mathematic Gallery" at Science City Kapurthala.

He said that the facilities at Science City are world class and he is impressed with its activities in building scientific temper, dispelling superstitions prevailing in the society and in simplifying complex scientific concepts for general people.

The National Power Council of India Limited has upgraded the nuclear gallery at Pashupat Ganga Science City, Kapurthala, to propagate awareness for enhancing and improving the public perception and understanding of nuclear power in the country.

The gallery was inaugurated by Dr. Neelima Jethi, Director General, Science City, here on Wednesday. Speaking at the occasion, Dr. Jethi said nuclear energy was first utilised commercially in the 1950s, since then it has continued to grow, and there are now around 440 nuclear power reactors across the world, providing 10 per cent of the planet's electricity.

Nuclear power is generated by bombarding uranium with neutrons and is an efficient source of energy with



Experts take stock of the upgraded nuclear gallery at Science City in Kazakhstan

low carbon footprints as opposed to burning fossil fuels. However, it has to be properly managed to ensure safety. Evidence over the past 60 years

The gallery showcases the various aspects of nuclear energy: benefits and hazards of nuclear power and its applications for the betterment of human life and environment. The gallery also focuses on several salient aspects of nuclear power generation through fascinating audio-visual interactive exhibits.

Dr Rajesh Grewal, Director, Science City, said nuclear energy was one of the most cost effective energy sources and was essential to our response to climate change and greenhouse gas emissions. The aim of setting up this gallery is to dispel misconceptions about nuclear energy and present visitors with the facts in an easy and enjoyable way he added.

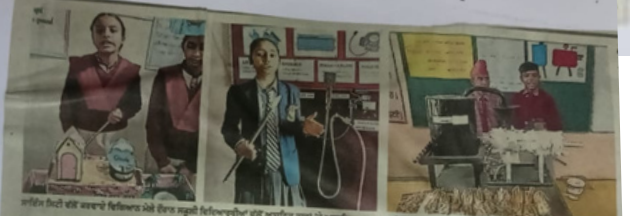


Proud dog owners with their pets at the Science City in Kapurthala on Sunday. TRIBUNE PHOTO



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Chandrasekhar, shared the steps taken by PGCs in the field of energy conservation. He indicated that a significant number of existing electrical appliances with energy efficient electrical appliances in Government Primary and Middle Schools (GMSs) has resulted in annual energy saving of 1,08,214 kWh resulting in reduction of 129 tonnes of CO<sub>2</sub> emissions under demonstration project. Dr Rajesh Ganesha, director, Science City, said the day



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# Most of country at risk of natural disasters: Expert

Webinar dwells on int'l cooperation for disaster reduction

TRIBUNE NEWS SERVICE

KAPURTHALA, OCTOBER 13 — Pushpa Gujral Science City celebrated International Day for Disaster Risk Reduction by organising a webinar. Hundred school students from all over Punjab participated in the webinar through virtual mode. The theme for this year's celebration was "International cooperation for developing countries to reduce their disaster risk and disaster losses".



A webinar in progress on the occasion of International Day for Disaster Risk Reduction at Science City in Kapurthala.

Kunal Bhatnagar, IFS, Joint Secretary, Ministry of Home Affairs, Government of India, National Disaster Management Authority, New Delhi, was the keynote speaker on this occasion.

While addressing participants, he said, "Natural and human-caused disasters affect thousands of people each year. These can cause catastrophic loss of life and physical destruction, besides mental trauma. Earthquakes, cyclones, storms, hurricanes, tsunamis and floods are the most common types of natural disasters. Others could be wildfires, droughts, floods,

hurricane and landslides. Examples of human-caused disasters include fires, industrial accidents, shootings, acts of terrorism, and incidents of mass violence."

"Eighty per cent of the geographical area of India is vulnerable to cyclones, floods, tsunamis, droughts, landslides or earthquakes. Without real action on climate in the next 10 years, extreme weather events will be overwhelming, especially for developing countries," he added.

"International cooperation for developing countries through official development aid and capacity

building is essential to boost disaster resilience in the face of extreme weather events and other natural and man-made hazards," he said.

He emphasised upon making disaster management part of educational curriculum at all levels as well as the need to conduct frequent drills, seminars, training programmes and live drills for children and youth to combat disasters.

In his introductory remarks, Dr Neelima Jerath, Director General, Science City, said International Day for Disaster Risk Reduction was started in 1989 to pro-

vide a global culture of risk awareness and disaster reduction.

"Disasters impact developing countries disproportionately, particularly in terms of mortality, numbers of people injured, displaced and rendered homeless, economic losses (as a percentage of GDP) and damage to critical infrastructure," Dr Neelima added.

She dwelled on the need to boost governments in disaster risk reduction to eradicate poverty and hunger in society and creation of scientific awareness on various and actions required at the public level to ensure minimum loss to life and property and facilitate recovery for the public in the event of a disaster.

While delivering vote of thanks on the occasion, Dr Rajesh Grover, Director Science City, said nature-based solutions, such as conserving forests, wetlands and coral reefs, could help communities prepare for, cope with, and recover from disasters, including slow-onset events such as drought.

# Pushpa Gujral Science City organises Food and Nutrition Show

ASHOK KAURA  
PUNJAB EXPRESS BUREAU  
Guruthala, November 14



Pushpa Gujral Science City in collaboration with Punjab Agri Export Corporation Ltd. organised Food and Nutrition Show to bring awareness on healthy eating habits.

Mohammad Tayyab, IS Special Secretary, Department of Finance of Punjab was the chief guest at this occasion.

He said that creating awareness amongst consumers about the benefits of eating healthy and the need behind safe food would lead to optimum utilization of resources as cultivation and

production of better quality food products. Further, India has the largest number of organic food producers and is ranked the ninth largest in terms of the land dedicated to organic agriculture, however, organic food market in India is growing as the awareness about organic foods is still low and is

limited to consumers in metro cities, he added.

Dr Neelima Jerath, Director General Science City giving introductory remarks at the occasion said that Food, Health and Nutrition are an indispensable part of life. Further, making healthy food choices, eating nutritious food and savour-

ing the diversity of food, which our country has to offer, needs to be inculcated in the society.

The benefits of traditional grains and crops, the release of aromatic compounds while cooking and the retention of vitamins and minerals in raw and cooked food as well as the science behind healthy food habits also needs to be effectively communicated amongst the masses, she added.

Ranbir Singh, General Manager, Punjab Agri Export Corporation Limited (PAGREXO) as Chief Executive Officer Punjab Agro Juices Limited was also present this occasion.

# Experts dwell on importance of wetlands, call for their protection

TRIBUNE NEWS SERVICE

KAPURTHALA, NOVEMBER 13 — Pushpa Gujral Science City and World Wetlands Day is being celebrated on Wednesday. The theme for this year's celebration is "Wetlands: People and Nature".

Dr Neelima Jerath, Director General, Science City, said wetlands are ecosystems that provide a wide range of services to society, including food, water, and biodiversity.

She said that wetlands are also important for climate change mitigation, as they store carbon in the soil and vegetation.



Pushpa Gujral Science City observed World Wetlands Day by organising a webinar to highlight the importance of wetlands in conserving and sustainably use on Wednesday. TRIBUNE PHOTO

is very essential that these are well-protected. Punjab has several natural and man-made wetlands and six of the state namely Haridwar, Kanli, Bhopal, Kanpur, Meerut, and the Beas are National Wetlands of International Importance. These wetlands are home to Indian River dolphins, smooth Indian otter and more than 400 species of birds, including several rare, endangered and threatened species. However, these wetlands are facing serious threats from point and non-point sources of pollution. She informed that government of India had notified Haridwar in 1984 and the state has been working for the wetland restoration since 1987 which has led to habitat improvement and stability in

# 'Creativity key to harness youth potential'

TRIBUNE NEWS SERVICE

KAPURTHALA, AUGUST 13 — Pushpa Gujral Science City (PGSC) organised a webinar to celebrate International Youth Day on Thursday. More than 100 students and teachers from different educational institutions of the state participated in the event. The theme of International Youth Day 2021 was "Transforming Food Systems: Youth Innovation for Human and Planetary Health".



Dr Neelima Jerath, Director General, Science City, said the event was held to bring youth issues to the forefront of the international community and to celebrate the potential of youth as active partners in society. She emphasised the need to develop inclusive support mechanisms to ensure that youth can contribute to the development of the nation. The Innovation Hub set up at the PGSC is meant to nurture the creativity and harness the innovative potential of the youth, she added.

Manoj Kumar Patel, Principal Scientist, CSIO, was the key speaker. He has the distinction of being a CSIR Young Scientist awardee and six innovations to his credit at a young age of 33. During his address he said energy, creativity, enthusiasm, determination and spirit of youth needs to be



strengthened to achieve progress in the field of science and technology. In his motivational address, he urged the youth to think innovatively and find the scientific solutions to the common issues faced by society in daily life. He also shared his innovations on development of electronic

# पुष्पा गुजराल साइंस सिटी में भोजन व पोषक आहार पर शो का किया आयोजन

कन्या कॉलेज की हरसिमरन कौर का सम्मान

पुष्पा गुजराल साइंस सिटी की ओर से आयोजित भोजन व पोषक आहार पर शो का आयोजन कन्या कॉलेज की हरसिमरन कौर का सम्मान के तहत किया गया। शो में भोजन व पोषक आहार पर विभिन्न विषयों पर प्रकाश डाला गया।



पुष्पा गुजराल साइंस सिटी में भोजन व पोषक आहार पर शो का किया आयोजन।

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# आने वाली पीढ़ियों के भविष्य की सुरक्षा

स्थायी विकास के लक्ष्य पर चलने की जरूरत

पुष्पा गुजराल साइंस सिटी की ओर से करवाया गया

पुष्पा गुजराल साइंस सिटी की ओर से आयोजित स्थायी विकास के लक्ष्य पर चलने की जरूरत के शो में भोजन व पोषक आहार पर विभिन्न विषयों पर प्रकाश डाला गया। शो में भोजन व पोषक आहार पर विभिन्न विषयों पर प्रकाश डाला गया। शो में भोजन व पोषक आहार पर विभिन्न विषयों पर प्रकाश डाला गया।



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# Annexures



# Members of PGSC Society

1. Minister of Science & Technology  
Punjab Civil Secretariat, Chandigarh
2. Sh. Sunder Sham Arora  
Minister, Industry and Commerce, GoP  
  
Sh. Rana Gurjit Singh ( w.e.f 7/12/21)  
Minister, Higher Education and  
Tech. Edu & Industrial Training, GoP
3. Sh. Santokh Singh Chaudhary  
Member, Lok Sabha, Punjab
4. Ms. Ambika Soni  
Member, Rajya Sabha, Punjab
5. Sh. Naresh Gujral  
5-A, Amrita Shergill Marg, New Delhi
6. Chief Secretary to Govt. of Punjab  
Punjab Civil Secretariat, Chandigarh
7. Principal Secretary  
Deptt. of Finance, Govt. of Punjab  
Punjab Civil Secretariat, Chandigarh
8. Director  
NTT, Jalandhar
9. Director  
CSIO, Sector 30, Chandigarh
10. Director  
National Agri-food Biotechnology  
Institute, Mohali
11. Director  
IISER, Sec 81, SAS Nagar
12. Director  
National Institute of Technical  
Teachers Education & Research, Chd
13. Director  
Terminal Ballistic Research Laboratory  
Chandigarh
14. Director, Confederation of Indian  
Industry (CII), Northern Region, Chd
15. Director  
NIPER, Mohali
16. Secretary to Government of India  
Ministry of Culture, Shastri Bhawan,  
New Delhi
17. Head  
NCSTC, Deptt. of Science and Technology,  
New Delhi
18. Financial Advisor  
Ministry of Culture,  
Shastri Bhavan, New Delhi
19. Vice Chancellor  
Punjab Technical University, Jalandhar
20. Vice-Chancellor  
Central University of Punjab, Bathinda.
21. Vice Chancellor  
Guru Nanak Dev University, Amritsar
22. Vice Chancellor  
Punjab Agriculture University, Ludhiana
23. Vice Chancellor  
Punjabi University, Patiala
24. Vice Chancellor  
Panjab University, Chandigarh
25. Vice Chancellor  
Baba Farid University of Health Sciences,  
Faridkot
26. Principal Secretary  
Deptt. of Science, Technology and  
Environment, Mini Secretariat, Chandigarh
27. Principal Secretary  
Deptt. of Industries, Govt. of Punjab,  
Udyog Bhawan, Chandigarh

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| 28. Secretary<br>Deptt. of Higher Education, Govt. of Punjab   | 32. Director<br>National Science Centre, New Delhi                                     |
| 29. Secretary<br>School Education, Govt. of Punjab             | 33. Executive Director<br>Punjab State Council for Science &<br>Technology, Chandigarh |
| 30. Director<br>Science City, Kolkata                          | 34. Director General/Member Secretary<br>Pushpa Gujral Science City<br>Kapurthala      |
| 31.. Chairman<br>State Board of Technical Education,<br>Punjab |  |

# Members of the Governing Body

1. Chief Secretary to Govt. of Punjab  
Punjab Civil Secretariat, Chandigarh
2. Sh. Naresh Gujral  
5-A, Amrita Shergill Marg, New Delhi
3. Sh. Santokh Singh Chaudhary  
Jalandhar, Punjab
4. S. Rana Gurjit Singh  
MLA, Kapurthala
5. Secretary to Government of India  
Ministry of Culture,  
Shastri Bhawan, New Delhi
6. Secretary to Govt. Of Punjab  
Deptt. Of Science and Tech & Env.  
Punjab Civil Sectt. 2, Sec 9, Chd
7. Principal Secretary  
School Education  
Punjab Civil Sectt. 2, Sec 9, Chd
8. H.H. (Brig.) Sukhjith Singh,  
The Villa, Kapurthala
9. Vice Chancellor  
Central University of Punjab,  
Bathinda, Punjab
10. Vice Chairman  
CRRID, Sector-19-A, Madhya Marg,  
Chandigarh
11. Director  
Central Scientific Instruments Org.,  
Chandigarh
12. Director General  
CSIR, Anusandhan Bhawan,  
2, Rafi Ahmed Kidwai Marg, New Delhi
13. Vice Chancellor  
Punjab Technical University, Jalandhar
14. Chairman  
CII, Northern Region, Sector 31-A,  
Chandigarh
15. Head, NCSTC  
Deptt. of Science and Technology,  
New Delhi
16. Executive Director  
PSCST, Chandigarh
17. Editor, Daily Ajit (Punjabi) and  
Ajit Samachar (Hindi), Jalandhar
18. Joint Editor  
Hind Samachar Group / Punjab Kesari,  
Jalandhar
19. Chief Editor  
Daily Post, Chandigarh
20. Director  
National Science Centre, New Delhi
21. Director  
NIPER, Mohali
22. Principal Secretary  
Tourism, Govt. of Punjab,  
Punjab Civil Secretariat - II, Chd



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|--|--|
| 23. Financial Advisor<br>Ministry of Culture,<br>Shastri Bhavan, New Delhi                 | 27. Deputy Commissioner<br>Kapurthala  |
| 24. Director<br>TBRL, Chandigarh   | 28. Vice Chancellor<br>Maharaja Ranjit Singh State Technical<br>University, Bathinda |
| 25. Director<br>NIT, Jalandhar   | 29. Director General/Member Secretary<br>Pushpa Gujral Science City<br>Kapurthala    |
| 26. Director General<br>Sardar Swarn Singh National Institute<br>of Bio-Energy, Kapurthala |  |



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