



# »» BUZZER ««

e-newsletter of Pushpa Gujral Science City



July-September 2023



## MESSAGE FROM THE DESK

Dear Readers

Greetings from Pushpa Gujral Science City.

It gives me immense pleasure to share with you that during the quarter we have added 2 new facilities at Science City for your edutainment - the Spark Theatre and Anti-gravity room, those were inaugurated by Hon'ble Secretary, Science, Technology & Environment, Sh. Rahul Tewari, IAS.



Further, I am happy to inform that as we progress, we are also venturing into the international foray. During the quarter, During the reporting quarter, PGSC organized 2 International events, viz. , International Seminar on "Education for Sustainable Development: Building Knowledge-Skills-Attitude" under India @75- Azadi Ka Amrit Mahotsav and 5th International Conference on Sustainability Education (ICSE) , led by Mobius foundation, New Delhi, in which PGSC partnered with UNESCO, UNEP, Centre for Environment Education, TERI, Foundation for Environment Education, Climate Reality Project, etc. and organized a session on "Science, Technology and Innovation for Sustainable Living". Other events organized were Van mahotsav, Green Consumer Day, Ozone Day, Engineers Day, etc under which several competitions, like poster making, quiz, slogan writing, etc were organized besides expert talks. PGSC also undertook "Swachhata hi Sewa" - a 15 day campaign to celebrate the Jan Andolan for Swachhata – a tribute to Mahatma Gandhi' and to spread awareness among citizens of Punjab about Swachhata.

Dear Readers, Diwali is just around the corner and Science City urges its visitors to celebrate an eco- friendly Diwali. Let us have a smoke free Diwali, minimize the poisonous effects of crackers and maximize happiness with earthen lamps and promote local artisans!!

We wish u a safe and happy festive season!

Dr. Neelima Jerath  
Director General

## What's New?

# SPARK THEATRE & ANTI GRAVITY ROOM

The facilities were inaugurated by Sh. Rahul Tewari, IAS, Secretary, Science, Technology & Environment on 02.08.2023.



**SPARK THEATRE:** is a unique facility installed to demonstrate how Electric Spark is produced. The main attractions are: Tesla Coil to demonstrate wireless transmission of electricity; Van De Graff generator which is a source of very high voltage used to produce X-ray beams to sterilize food materials, as well as in entertainment industry; Spark Ladder & Spark Wheel for production of arc for ionization of air and a special Earthing Cage which protects from lightning, etc.

**ANTI-GRAVITY ROOM:** The deceptive floor construction of Anti-Gravity Room makes it appear that one is defying gravity. This is demonstrated by a ball which rolls against gravity.





## INTERNATIONAL SEMINAR ON “EDUCATION FOR SUSTAINABLE DEVELOPMENT: BUILDING KNOWLEDGE-SKILLS-ATTITUDE” (JULY 15, 2023)

To celebrate India's march towards progress under Azadi Ka Amrit Mahotsav- India @ 75, PGSC organized an International Seminar with the objective to bring together national/international experts, policy makers and educators/practitioners to deliberate on various innovative pedagogic methods that can be used in schools to promote education for sustainable development and to emulate from each others experiences.

The seminar provided platform for forging new connections and fostering international collaborations. Around 200 participants, including principals of Adarsh Schools set up by Punjab Govt. in various districts of Punjab, teachers from Govt. Schools from several districts of Punjab and CBSE & ICSE schools across Punjab participated in the seminar.

The Chief Guest was Dr. Satbir Bedi, IAS (Retd.), Chairperson, PSEB and the Guest of Honour was Dr. Rupanjali Karthik, Special Secretary, Deptt. of School Education, GoP



DR. SATBIR BEDI



DR. RUPANJALI KARTHIK

- Mr. Martin Jarrath, General Coordinator, UNESCO Baltic Sea Project shared case studies on ESD implementation by UNESCO in 9 European countries (Germany, Russia, Denmark, Sweden, Finland, Estonia, Latvia, Lithuania, Poland) involving 180 schools

- Ms. Scilla Edmonds, an ESD expert & curriculum developer and Principal at "The Birches" Durban, Kwazulu-Natal, South Africa shared how Education on Sustainable Development can help develop positive attitude towards environment conservation and sustainability.

- Dr. Neelima Jerath, Director General, PGSC who is also a trained SDG expert from the University of Uppsala, Sweden and a recognized EE expert by UNESCO spoke about the development of ESD, especially in the state of Punjab, India.

- Dr. Livleen Kaur Kahlon, Environment Education & Awareness Division, TERI spoke on the three pillars of sustainability, i.e. Ecology, Economy & Society, as well as, provide information about TERI's several programs across India.

- Mr. P.C. Tewari, Assistant Commissioner, Kendriya Vidyalaya Sangathan shared his views, experiences and case studies on how KVKs have been implementing EE and ESD in schools.



MR. MARTIN JARRATH



MS. SCILLA EDMONDS



DR. LIVLEEN KAUR KAHLON



MR. P.C. TEWARI

KEY  
SPEAKERS



## 5TH INTERNATIONAL CONFERENCE ON SUSTAINABILITY EDUCATION (ICSE): Parallel Session organized by PGSC



**MRS. NAMITA GUPTA**  
HEAD, INSPIRE-MANAK, DST, GOI



**DR. NEELIMA JERATH**  
DIRECTOR GENERAL, PGSC



**MR. SHUBHAM TANDON**  
PROJECT OFFICER, UNDP

PGSC organized a session on "Science, Technology and Innovation for Sustainable Living" on 20.09.2023 at 5th International Conference on Sustainability Education (ICSE) held at India Habitat Centre, New Delhi on 19th-20th September, 2023. The conference was organized in partnership with Mobius Foundation, New Delhi along with various international and national organizations, like, UNESCO, UNEP, Centre for Environment Education, Centre for Environment Communication, Foundation for Environment Education, WWF-India, etc.

The session was chaired by Mrs. Namita Gupta, Head, INSPIRE-MANAK, DST, GoI. The key speakers were: Dr. Neelima Jerath, Director General, PGSC, who spoke on "Overview of SDGs" & shared the work of SD-ASK Clubs of PGSC and Mr. Shubham Tandon, Project Officer, UNDP who spoke on Climate Change and Sustainability.

Preceding the session, students from Delhi, Punjab and Haryana were invited to submit their innovative projects on:

- Climate Action
- Clean & Affordable Energy
- Clean Water

PGSC received 250 projects, out of which 30 projects were selected by a jury comprising Dr. Jaspreet Kaur, Punjab University, Chandigarh; Dr. Balwinder Singh Sooch, Punjabi University, Patiala; and Dr. Loveleen Kaur, PGSC for poster presentation. Out of these the Best Projects were evaluated on the spot by a jury comprising Dr. C. R Magesh, Scientist C, National Museum of Natural History, GoI and Ms. Saumya Sharma, Principal, Arwachin Bharti Bhawan Sr. Sec. School, New Delhi. The winners were awarded cash prizes. More than 100 students, teachers and seminar delegates participated.

**1st Prize:** Harmandeep Kaur, GSSS Jabbowal

**2nd Prize:** Amit Kumar & Dipanshu Sehwat, Army Public School, Hissar

**3rd Prize:** Gurshaan Singh & Shubham Arora, Oxford Public School, Bathinda

**Consolations:** Vidi Aswani 7 Aarav Tanwar, Springdales Public School, Dhaula Kuan, New Delhi & Gowri Batra, KV SPG Dwarka

## ➤➤➤ VAN MAHOTSAV ( JULY 1 - 7, 2023 )

General students visiting PGSC were motivated to plant trees and conserve Biodiversity

## ➤➤➤ WORLD POPULATION DAY ( JULY 11, 2023 )

World Population Day aims to raise awareness about global population issues and their impact on society. To raise awareness and educate people about the challenges and consequences associated with population growth, PGSC celebrated World Population Day. Following activities were organized:

- Nukkad Natak performed by students of Bawa Lalwani Public School, Kapurthala at Village Wadala Khurd, Kapurthala.
- Essay writing competition on the theme “Sustainable Growth for Sustainable Future”. Students from 6 schools participated in the competition.

The event was organized under SD ASK programme of PGSC.

Winners:

1st Prize: Amandeep Kaur, GSSS Jabbowal

2nd Prize: Rumani Gupta, Baba Lalwani Public School

3rd Prize: Jasleen Kaur, Pioneer International School, Rurka Kalan





**Director General, PGSC, Neelima Jerath hoists Indian National Flag at Science City Independence Day 2023**

## INTERNATIONAL YOUTH DAY (AUGUST 12, 2023)

Today, the world is embarking on a green transition. The shift towards an environmentally sustainable and climate-friendly world is critical not only for responding to the global climate crisis but also for achieving the Sustainable Development Goals (SDGs). A successful transition towards a greener world will depend on the development of green skills in the population. While green skills are relevant for people of all ages, they have heightened importance for younger people, who can contribute to the green transition for a longer period of time.

PGSC celebrated the day with the following activities:

- Expert Talk: Topic - "Green Skills for Youth: towards a Sustainable World". Mr. Shibananda Dash, Director, Munjal Birmingham City University Centre of Innovation and Entrepreneurship.

- Youth Discussion forum: Moderated by Mr. Shibananda Dash

156 students/teachers from different colleges and schools participated.





## LIVE SCREENING OF LANDING OF CHANDRAYAAN-3 (23.08.23 )



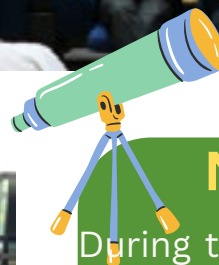
An expert talk followed by live screening of landing of Chandrayaan-3 on Moon's South Pole on big screen was organized at PGSC. >200 students, general public from surrounding villages and Science City Staff attended the historic lunar landing.

## WORKSHOP ON SCIENCE JOURNALISM THROUGH VERNACULAR MEDIA (24.08.23)

To provide a platform to budding journalists to improve their skills and develop professionalism in Science Communication, a workshop on Science Journalism through Vernacular Media was organized. The Key Resource Persons were:

- Sh. Megh Raj Mitter, Founder Tarksheel Society Bharat
- Sh. Baljit Balli, Editor of Babushahi Network
- Sh. Varinder Singh Walia, Editor, Punjabi Jagran.

It was attended by >150 participants including young journalists, as well as, students and teachers of Journalism & Mass Communication from different colleges across the Punjab.



## Night Sky Watching

During the reporting quarter, Night Sky Watching was organized at Govt. School, Teuri, Una for 100 students (28.09.2023) and KV-1, RCF, Kapurthala for 158 students (30.09.2023)



**GRANDPARENTS DAY CELEBRATION**  
Grandparents were provided FREE visit to Science City

# INNOVATION HUB

## WORKSHOP ON BOOMERANG PAPER AIRPLANE (07.07.23)

This workshop was organized at Lord Krishna School, Sultanpur Lodhi to explain to the students the concept of thrust, lift, drag and gravity and the role of air movement over and under the wings. The students were also guided to make paper planes that could fly back to the initial position. Students learnt designing of wings that assisted the paper plane to work like a boomerang. 56 students participated.

## ELECTRONICS FOR BEGINNERS (24.07.23)

The workshop was organized at the Innovation Hub, PGSC. Students learnt basic working of electronic components and their usage in electronic circuits. An introduction to digital multi-meter and its usage in troubleshooting was given. Students also learnt concept of transistors, relays, resistances and rectifiers to convert AC signal into Direct Current. 27 students participated.

## ASSEMBLING AND PROGRAMING OF AN OBSTACLE DETECTOR ROBOT (19.07.23)

This workshop was organized at Govt. High School, Dhariwal Dona, Kapurthala. In this workshop, students learnt assembling of a robot, working of a micro-controller and its interfacing with sensors and motors. Students also assembled their own robots and understood coding technique to program the robot using LEGO Kits. 28 students participated.

## WORKSHOP ON BLOCK CODING (12.09.2023)

This workshop was organized exclusively for Girls Members of Innovation Hub at PGSC. In this workshop, students learnt about basics of block coding using open source online platform Tinkercad, coding techniques for sensor based robots, we well as, electronic circuits. 27 students participated.

## WORKSHOP ON SMART SENSORS (02.08.2023)

This workshop was organized for Innovation Hub Members at PGSC. In this workshop, students learnt about working of various sensors like, IR, Ultra-sonic and PIR Sensor. Students also learnt about relays and interfacing of sensors. 14 students participated.

## WORKSHOP ON ROBOTICS (01.09.2023)

The workshop was organized at Doaba Sr. Sec. School, Hoshiarpur involving participation of 46 students. During the practical session, students learnt assembling of robot and understood working of sensors and its interfacing with micro controller.





## WORKSHOP ON 5S VISUAL WORKPLACE ORGANIZATION (13.09.23)

A workshop on 5S Methodology (Sort, Straighten, Shine, Standardize and Sustain) was organized by PGSC.



5S is a 5-step methodology that when followed, creates a more organized and productive workspace. Mr. Sonu Bansal, Associate Counsellor, CII provided insights into the 5S methodology, tracing its origin to Japanese principles. >50 participants comprising individuals from technical institutes attended the workshop. The workshop was organized in collaboration with CII.

## ENGINEER'S DAY (15.09.23)

PGSC organized Robotics Championship with participation of around 200 budding Engineer's from different Engineering and Polytechnic colleges who demonstrated their skills, creativity, and teamwork in designing and operating robots. Following Contests were organized:

- Drag Race (20 ft. straight race)
- Robo Off Roothing
- Tug of War

Dr. Afzal Sikander, Assistant Professor, NIT Jalandhar assessed the robots' performance during various competitions and provided constructive feedback to the participants. This added an educational dimension to the competition, allowing students to learn from expert.

### Winners:

- 1st Prize:** Vishesh Verma , Jaskaran, Gurkeerat Singh, Anantveer Singh, Jaskaran, GNA University, Phagwara  
**2nd Prize:** Ashish, Vinith Chandra, Anish Basu, Nitin, Sadha, Lovely Professional University, Jalandhar  
**3rd Prize:** Nikhil, Raja, Manasa, Naveen, Lovely Professional University, Jalandhar  
**Consolation prize:** Yuvraj Singh, Priyanshu Rai, Madhav, Government Polytechnic College, Khunimajra, Kharar



## INTERNATIONAL DAY FOR THE PRESERVATION OF THE OZONE LAYER (16.09.2023)

The International Day for the Preservation of the Ozone Layer, is dedicated to raising awareness about the importance of the ozone layer in protecting life. PGSC observed the day with following activities :

- Expert Talk on “Ozone: Good or Bad”
- Slogan writing competition on “Protection of Ozone Layer”

148 students/teachers from different schools participated. The program was sponsored by Ministry of Earth Sciences, Govt. of India.



## GREEN CONSUMER DAY (28.09.2023)

Green Consumer Day is celebrated to build awareness around the public that how even the smallest actions we take as individuals can help or harm the Planet. PGSC organized a project / model /idea display competition to celebrate the day to build awareness that how even the smallest actions as individuals can help or harm the planet. 45 projects / models /ideas towards Zero Waste practices in their school were presented. Winners were awarded. >200 students and teachers participated.

- 1st Prize:** Lord Krishna School, Sultanpur Lodhi
- 2nd Prize:** School of Eminence GSSS Kapurthala
- 3rd Prize:** DAV Kapurthala



## SWACHHTA HI SEWA CAMPAIGN 2023 (17.09.2023-30.09.2023)

To celebrate the Jan Andolan for Swachhata – a tribute to Mahatma Gandhi’ and to spread awareness among citizens of Punjab about Swachhata, PGSC organized following activities:

- Awareness on Clean water through live demonstration
- Awareness campaign titled “Hara Geela, Sookha Neela” (waste segregation and management)
- Cleaning of PGSC premises

A 5-day campaign (26.09.2023 to 30.09.2023) on the theme “Garbage Free India” was undertaken by SD-ASK clubs of PGSC at their schools. Following activities were organized:

- Clean your campus
- Paint the litter bin
- Waste Segregation and compost making activity
- Conduct the wet waste audit of the school (special focus on food waste)
- Clean a Wetland ( activity at Kanjali wetland)



# Ticket Prices

TICKET	ADULT	STUDENT / CHILDREN	FAMILY (2 ADULT + 2 CHILDREN)
<b>Entry Ticket</b>	180*	125*	550**
<b>Package Ticket: 1</b> Entry to Galleries, Large Format Theatre or Digital Planetarium Laser Show, 3D Show and Climate Change Theatre (without Simulators)	405*	310*	1285**
<b>Package Ticket-I Group</b> for Group > =25	395*	295*	1220**
<b>Package Ticket: 2</b> Entry to Galleries, Large Format Theatre or Digital Planetarium, Laser Show , 3D Show, Climate Change Theatre, flight simulator, Earthquake simulator	485*	350*	1505**
<b>Package Ticket:2</b> for Group > =25	460*	330*	1450**

## Note:-

- Special discounted packages (@50%) to orphans,handicaps,bpl,War Widow and families, senior citizens etc.
- Entry of one teacher is complimentary with the group of at least 25 students. Additional teachers will be charged ticket rates equivalent to that of students.
- \*includes food coupon of Rs.20/-
- \*\*includes food coupon of Rs.80/-

## Annual Ticket Charges

You can visit PGSC any no. of time within one year of purchase of Annual Ticket. The cost of ticket is recovered in less than three visits. The Annual ticket rates are:

Student / Teacher: Rs 635/-

Adults: Rs 900/-

Orphans/ Handicapped / BPL Students: 320/-

Family (2 Adults + 2 Children (<18 yrs)): Rs 2750/-

Senior Citizens / Handicapped / BPL Adult member: 450/-

BPL / War Widow Families: Rs 1375/-

To know about membership benefits, please contact:

Ms. Manpreet Kaur; M: 7889291007

## HOSTEL FACILITY FOR STUDENTS/TEACHERS

AC accommodation for 100 students and 10 teachers is available. Separate arrangement for boys and girls. Stay charges: Rs 150/- per person (Food charges extra).For hostel booking, contact: Mrs Harsimran Arora; Phone: 01822-501963, 501964

## NIGHT SKY WATCHING

Science City provides Night Sky Watching facility when clear sky offers best view of the planets. Students/ Teachers/Adult: 60/-. Science City also provides Night Sky watching facility on demand of educational institutions at their own premises. Student / Teachers : Rs. 60/-. Minimum students required for booking: 100 + to and fro Travelling @ Rs.12 per km + stay facility for PGSC team for 1 night. For more details & reservations, please contact: Ms. Kanika Sharma ; Mobile: 8837897789

## BUSINESS OPPORTUNITIES

Register yourself as a Tour Operator or Be our Sponsors. For More Information, Please Contact: Dr. Munish Soin, Scientist D; M: 8146580387

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