

# Annual Report 2016-17



**Pushpa Gujral**

  
**SCIENCE**  
**City**

## Message from the Director General

Another year of fulfilment where we had been successful in achieving our vision and mission of spreading scientific temper. I am extremely delighted in presenting this year's annual report.

Pushpa Gujral Science City in collaboration with the Department of Education initiated Mukh Mantri Vigyan Yatra giving opportunity to 1.4 lac students from Government schools all over the state to visit Science City. We are also proud to inform you that our outreach programme Mobile Science Exhibition which was started in October 2015 has covered all the districts of the state and has reached more than two lac visitors. The year 2016 was a kick -off year for Science City as it received an overwhelming response and more than 4 lac visitors including students from ITIs, Higher Education, Engineering, Polytechnic, Nursing Colleges and general public visited Science City.

I am glad to announce that in a bid to boost innovations among youngsters, Science City in collaboration with NCSM is all set to launch Innovation Hub. The hub will be sixth in India. Innovation hub that will be equipped with Hall of Fame , stories of inventions and inventors, multimedia kiosks to explore major inventions, e-journals, books and portals, technology labs for robotics will provide an opportunity for children of various age groups to work at the centre so as to develop their ideas on science and technology.

Science City offers a wide range of programmes for students aiming at complementing the school's formal science education with enriching fun events, competitions and outreach activities. The main objective of communication & popularization of Science programmes is to generate scientific temper among the masses and make the people think scientifically at every stage. The year 2016-17 was action packed, swarming with events. A number of events viz. Earth Day, Biodiversity day, Environment day, Dog show, flower show and Innotech were organized. Conservation education is an important part of information dissemination aimed at spreading the message of nature conservation. As part of this, five nature awareness camps were conducted in the past one year for students of Govt. Schools.

Science City prides itself in making science an inspiring and exciting experience for people of all the ages. Over the past years, Science City has been a custodian of creativity and innovation, continuing to ignite young minds and fostering scientifically savvy new generation. Science City entertains visitors with more than 300 exhibits and other unique experiences spread across 72 acres of land.

Science City's interactive exhibits housed in various galleries cover a wide range of topics related to Science & Technology. The galleries developed at Science City are on Space and Aviation, Amazing Living Machine (Health Gallery), HIV/ AIDS Awareness Gallery, Bio-Technology Gallery, Science of Sports, Fun Science, Dinosaur Park, Virtual Reality, Cyber Space, Life through the Ages, Climate Change Theatre and Bird Gallery. These galleries present memorable, knowledge-based and exciting experience to the visitors. In addition to these galleries, a state level Energy Education and Awareness Park has been setup with the assistance of Ministry of New and Renewable Energy Sources, Govt. of India and Punjab Energy Development Agency.

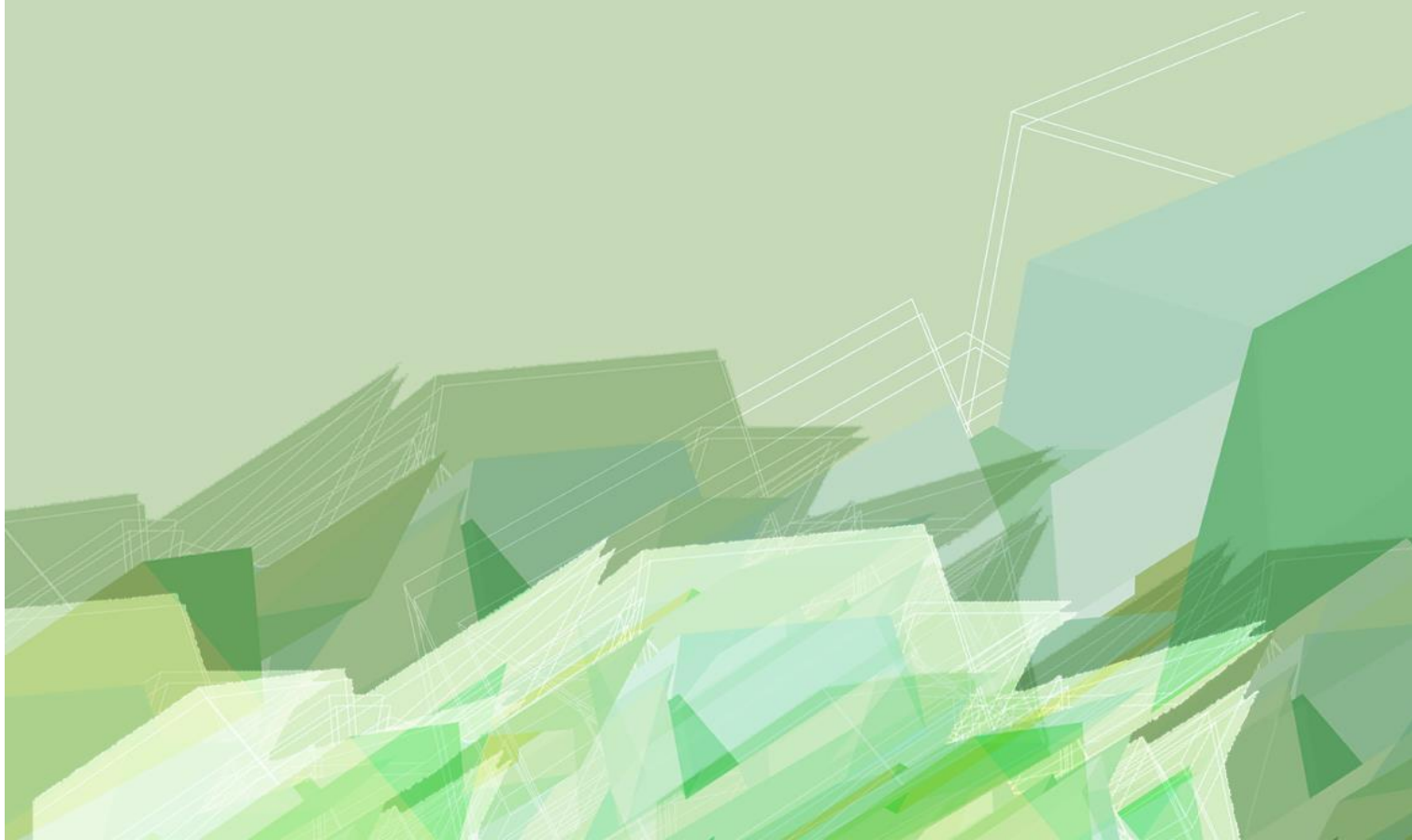
Also, on display are MIG-23, Vijayanta Tank, Anti Aircraft Gun and Torpedo donated by Ministry of Defence, Govt. of India. Ministry of Railways, Gol has setup a Railway Gallery at the Science City.

Science City is a proud recipient of National Award for Energy Conservation-2013 and National award for Outstanding Efforts in Science and Technology Communication-2015. The project RISHI (Regional Innovation Science Hub for Innovators) was adjudged amongst the "Top 100 projects in India" and conferred with SKOCH order of merit award.

Science City has received approximately 39 lac visitors since its opening to the public on March 20, 2005. From then on till date, Science City, has come a long way. With its various galleries and multifarious activities, it has become a place where Science happens in front of one's eyes through animated and interactive models. The Science City, Kapurthala is on a fast track in achieving its objective of inculcating scientific culture and temperament among the general masses and the youth in particular.

Looking forward to sharing many more achievements during the years to come.

Mohammad. Tayyab  
(Director General)



## *Our Vision*

We will be an institution of excellence to inculcate scientific temper and generate & nurture creativity especially in the young minds.

## *Our Mission*

We will be a place for :

- Education: To provide young people with the opportunity to explore informal ways of supplementing formal education.
- Widening knowledge: To offer everyone – children and adults, general public and students – avenues to experience its well equipped resource centres.
- Demonstrating emerging technologies: such as nano-technology, micro-machines, levitation, genomics etc.
- Information: To disseminate information on the latest developments in science and technology.
- Innovation: To provide opportunity to individuals to try out their ideas in the design and development of new products.

and above all

- Edutainment: To learn through experience, fun and entertainment.

## *Our Objectives*

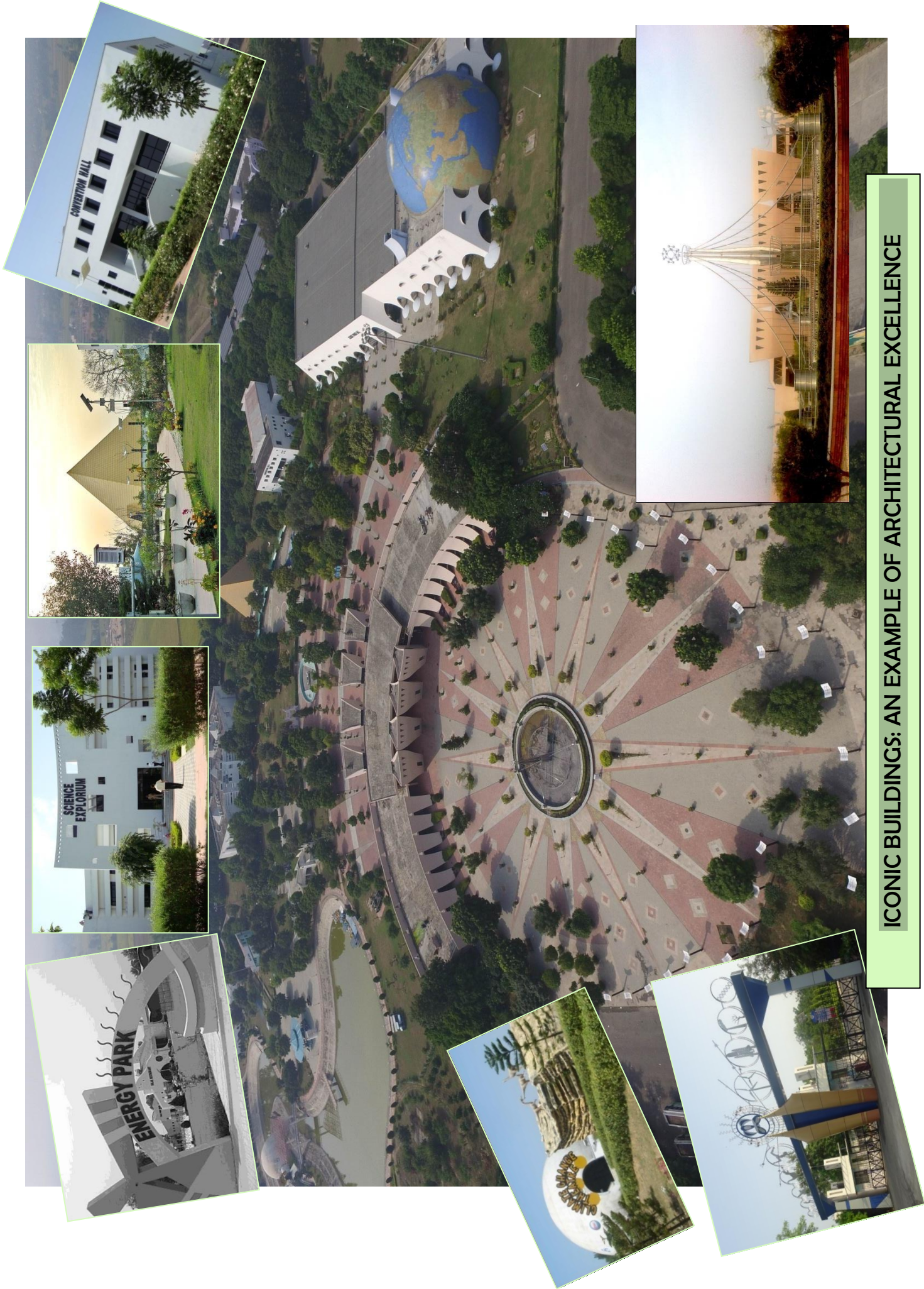
- To supplement formal science education, to create excitement among the students about science & technology and to enthuse them to take up careers in science & technology
- To promote creativity and innovation among the young generation
- To build scientific temper among the general masses and to develop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



# Glimpses of Science City







ICONIC BUILDINGS: AN EXAMPLE OF ARCHITECTURAL EXCELLENCE















## Star Attractions & Facilities At Science City

■ **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 lac 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 immersible experience.

■ **Digital Planetarium:** The most amazing experience in any planetarium through multi-channel digital planetarium system is to see the night sky, and a guided tour through the planets & constellations.

■ **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.

■ **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):** Amazing living machine gallery is an effort to enlighten the general public about the functioning of various organs of the human body and understand the extraordinary bridge between what we see and the way they are. 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:** Around 100 numbers of assorted interactive exhibits have been designed and fabricated and clustered together on the basis of basic fundamental science themes.

■ **Virtual Reality and Cyber space Gallery:** This gallery is an exciting place with lots of fun, entertainment and education for people of all ages and background. Here, visitors play with Butterflies, Sand, Molecular Bubbles, Shadows, Marble Marshal and Magic Flowers. Children specially enjoy dancing with virtual music and play with virtual games.

■ **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.

■ **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.

■ **Defence Gallery:** Defence gallery consists of weapons and aircrafts that were used during World war II 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-II donated by the Govt. of Punjab to the Science City is also installed for giving sit-in experience to the visiting public.

■ **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 Dinosaurs with movements and special sound effects placed under a volcano.

■ **Science of Sports:** 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 and improving performance in sports.

■ **Climate Change Theatre:** is a unique experience-filled theatre showing 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.

■ **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.

# ***Year In Review***

## ***2016-17***



## Who Joined, Who Left?



Dr Neelima Jerath

Dr. Neelima Jerath superannuated on 30<sup>th</sup> June 2016. She took over the additional charge of Director General, Science City on 3<sup>rd</sup> June 2014. Dr Jerath was the Executive Director, Punjab State Council for Science & Technology and founder Member Secretary of Punjab Biodiversity Board and Punjab State Innovation Council.



Sh Jaskiran Singh, IAS

Sh. Jaskiran Singh, Deputy Commissioner, Kapurthala took over the additional charge of Director General, Science City from 1<sup>st</sup> July, 2016 till 9<sup>th</sup> November, 2016.



Sh. Gurloleen Singh Sidhu, IAS

Sh. Gurloleen Singh Sidhu, Deputy Commissioner, Kapurthala took over the additional charge of Director General, Science City from 16<sup>th</sup> November, 2016 till 17<sup>th</sup> March, 2017.



Mohammad Tayyab, IAS

Mohammad Tayyab, Deputy Commissioner, Kapurthala took over the additional charge of Director General, Science City on 17<sup>th</sup> March, 2017.





## Highlights From a Wondrous Year

**Total Annual Attendance increased by 29.41 %**

**Mukh Mantri Vigyan Yatra, a great success: More than 1.4 lac students visited Science City**

**Mobile Science Exhibition reached more than 2 lac people all over Punjab**

**New I-max movie America Wild: National Parks Adventure launched**

**Project RISHI adjudged amongst the “Top 100 Projects in India” and conferred with SKOCH order of merit award during an award ceremony held on 15-12-2016 organized by the SKOCH Group at New Delhi**

## Mukh Mantri Vigyan Yatra, a great success



It was observed that students studying in the government schools remain deprived of the facility and the advantages of a visit to Science City due to financial constraints. In order to facilitate these students to visit Science City and take advantage of the facilities and activities of the Science City so as to encourage innovation and creativity among young students and to motivate them to take up careers in science and technology, Department of Education, Government of Punjab in collaboration with Pushpa Gujral Science City, Kapurthala initiated "Mukh Mantri Vigyaan Yatra" for students of Government schools of Punjab.

The visit of students to Science City was so designed that students from all the 22 districts of Punjab visit Science City. During the excursion period, a bus carrying 50 students and 2 teachers from each district visited the Science City. Hence, about 1100 students visited the Science City daily during the excursion period. A total of 1.4 lac students visited Science City under this scheme. Visit of students to Science City proved to be a significant step leading to flourishing and enriching the knowledge and skills of the students in application based science and technology.





*We reached  
2 lac people  
through our  
Mobile  
Science  
Programme!!!!*



Mobile Science Exhibition was a joint outreach programme of Pushpa Gujral Science City & I.K.G Punjab Technical University and was supported by National Council for Science and Technology Communications, Department of Science & Technology, Govt, New Delhi. It was flagged off on 09.09.2015 by the then Hon'ble Chief Minister, Punjab S. Parkash Singh Badal and started from Rupnagar district where it was inaugurated by the then Hon'ble Education Minister, Dr Daljit Singh Cheema on October 8, 2015 and has covered all the 22 districts across Punjab receiving more than 2 lakh visitors at its various halts

Mobile Science Exhibition was an attempt of Pushpa Gujral Science City to communicate science in rural areas targeting the population unable to visit Science City. It aimed at reaching out to people from all walks of life through fun and accessible scientific content, and removing the barriers to engagement. The exhibition comprised 34 interactive exhibits and information panels giving the students/visitors an opportunity to learn through the process of interaction and discovery. The broad components of the exhibition were Health Education, Energy Education and awareness, Waste Management, Water Management and Environment Education. The bus was also equipped with Mobile planetarium and high powered telescopes to hold night sky watching sessions where visitors under a starry night sky enjoyed telescopic views of beautiful objects, including planets, nebulae, star clusters and the Moon. Demonstrations and special programs are also taken up to educate the visiting public about the renewable energy sources especially the use of solar energy, water testing and clean water properties. The exhibition was organised in predetermined schools in close coordination with the education department. The exhibition bus remained in the school for 2-3 days. At each site neighbouring schools were also invited.

## New I-Max Movie Launched



The Large format film Theatre is an experience like no other! Covered with 25 lac computer-designed tiles of one square inch each on a giant globe, the architecture and state-of-the-art technology combine to create experiences so real you'll forget you're in a theatre. It takes you places you have only dreamed of going, and the sound system ensures you won't just hear the movie - you'll feel it in your bones.

*America Wild: National Parks Adventure* was launched in the large format Film Theatre on 15<sup>th</sup> February 2017. The film takes audiences on the ultimate off-trail adventure into America's awe-inspiring great outdoors and untamed wilderness. Immersive cinematography takes viewers soaring over red rock canyons, hurtling up craggy mountain peaks and into other-worldly realms found within America's most legendary outdoor playgrounds, including Yellowstone, Glacier National Park, Yosemite, and Arches.







Kabad  
Se jugad

Todh forh  
ke jorh

Break &  
Make

**COMING SOON!!!**

**INNOVATION HUB**

Connecting Innovative minds

Science City in collaboration with National Council for Science Museums is setting up a Innovation Hub. It is the first of its kind in Punjab and sixth in India, aimed at supplementing formal school education for seeking new ways to bring innovative science teaching and experiences to students. The Innovation Hub will offer children an inquiry based science learning approach that is student constructed as opposed to teacher-transmitted, hands-on as opposed to lecture-based. The Innovation hub will be equipped with components namely, Hall of Fame with stories of Inventions and Inventors; Innovation Resource Centre with online access to innovation-centric resources; Innovative Laboratory to carry out activities, experiments and projects; Tech Lab for Robotics & Microprocessor Programming; Tod-Phod-Jod (Break & Remake) for students to open gadgets and reassemble them on their own; Kabad Se Jugad (Build from Scrap) for students to develop things from scrap and low-cost materials and an Idea Box for children to propose ideas and create an idea bank. The best ideas will be chosen for experimentation, model making and project work. In addition, children will be encouraged to identify real life problem/investigatory projects and work on for solutions under the guidance of experts/mentors. Work order to Set up "Innovation Hub" at PGSC, Kapurthala was awarded to M/s Tech Mech Services, Kolkatta dated 17.02.2017 at total cost of Rs 27,79,000/-. The setting up of hub is in progress and it is expected that the facility shall start by October 2017.



### SMS facility

- Science City availed free SMS facility under Mobile Governance in Punjab. Under this, SMS were sent to raise awareness science & technology days and events.

### Grants Received

- PGSC received grant-in-aid amounting to Rs. 1 crore from Govt. of Punjab for the visit of students of government schools of Punjab

### Maintenance Work

- Maintenance of trees, shrubs and lawns including removal of weeds, use of Lawn Mower & watering the plants is done on regular basis.
- Maintenance of nursery, green house and bio fertilizer pits

### Sponsorships & Contracts

- Sponsorship of Space Theatre / Digital Planetarium was awarded to M/s Lovely Professional University, Phagwara @ Rs.15.50 Lacs + Taxes per annum.
- The contract for food services was awarded to M/s Talwar Sweet Shop. The contractor initiated his services w.e.f. 26.05.2016.
- Contract for photography services was awarded to M/s Vintage India, Patiala on 19.08.2016.



# *Incubating Innovation*



## **Summer Camp (May 30 - June 1, 2016)**

Science City organized summer camp in its campus on Hands on activities in Mathematics, Model Rocketry, Basic Electronics and Nature camp for school students of 5th to 8th standard from 30<sup>th</sup> May to 1<sup>st</sup> June 2016.

82 students from different schools (Kapurthala & Jalandhar Districts) participated in the camp. The salient features of this camp were simplifying the complex concepts of science, develop and nurture Scientific Temper and skill development..

## **Nature Camp**

Pushpa Gujral Science City in collaboration with Punjab State Council for Science and Technology, Chandigarh organized Nature Camps (1<sup>st</sup>: 10.08.2016 to 12.08.2016, 2<sup>nd</sup>: 30.08.2016 to 01.09.2016, 3<sup>rd</sup>: 6.09.2016 to 8.09.2016, 4<sup>th</sup>: 18.10.2016-

20.10.2016 & 5<sup>th</sup>:03.11.2016 to 05.11.2016) on Energy Conservation and Environment Cleanliness for NGC school students from SBS Nagar and Amritsar District. These Nature Camps comprised total of five batches @ 50 students in each batch. During the camp, the students visited Science City galleries and Climate Change Theatre on the first day where they learned their role to prevent Climate change and importance of natural resources. The students visited Sardar Swaran Singh

National Institute of Bio-energy and sought knowledge on bio-energy and renewable energy sources and Kanjli Wetland. Dr. R.K Luna, Add. Principal Chief Conservator (Retd.) of Forests and Dr. Lakhbir Singh, President, PEHAL, a local NGO, accompanied students alternatively during their visit to Kanjli wetland and gave detailed information to the participants about the biodiversity in wetlands of Punjab. On the third day, demonstration on portable water testing kits was given by Ms. Gitanjali Kanwar, Senior Project Officer, WWF-India Harike Field Office, Tarn Taran.

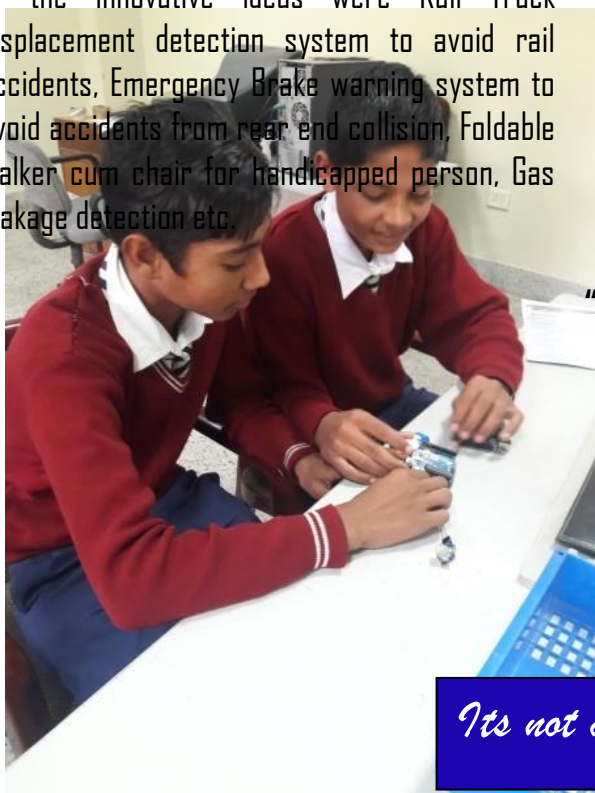




## Regional Innovation Science Hub for Innovators (RISHI)

Pushpa Gujral Science City, Kapurthala in collaboration with NCSTC, Department of Science & Technology, GOI started a project titled "RISHI" in the year 2011. The project was aimed at providing platform to talented students to pursue their promising innovative ideas so as to offer solution to the community problems through Science and Technology. The talented students from various schools (government/private) having potential innovative ideas were selected by expert committee for a 3- week camp organized at Pushpa Gujral Science City, Kapurthala.

RISHI project was organized in two phases. The first phase started in 2011 (for two years) and four camps were organized. The second phase started in 2015 and six camps were organized. During the year 2016-17, PGSC organized two 3 week internship camps from 01.11.2016 to 21.11.2016 and 12.12.2016 to 31.12.2016, in which total 18 talented students participated. The selected students got opportunity to give practical shape to their innovative ideas. Some of the innovative ideas were Rail Track displacement detection system to avoid rail accidents, Emergency Brake warning system to avoid accidents from rear end collision, Foldable walker cum chair for handicapped person, Gas leakage detection etc.



The project was adjudged amongst the "Top 100 Projects in India" and conferred with SKOCH Order of Merit award



*It's not about ideas. It's about making things happen*





### Inno-Tech 2017 (March 17-19, 2017)

Science City in collaboration with IKG Punjab Technical University, Kapurthala organized INNO-TECH-2017 from March 17-19, 2017 to provide a platform to the students of technical Institutes to display their innovative creations as well as an opportunity to the students to showcase their talent and vision. It is intended to encourage love for Science among the youth through enquiry-based learning and to convert their imaginative ideas into real life models/ projects and several other creative and skill enhancing activities.

Science City celebrated this event through display of projects/ models

and Quiz Competition. About 800 students from different professional colleges participated in various events. The competitions were organized under following categories:-

- Category I: Engineering College
- Category II: Polytechnic College
- Category III: Industrial Training Institutes
- Category IV: Post Graduate and Teacher

Dr. Ajay Sharma, Director, NIT, New Delhi was the Chief Guest. In his address to the students, Dr. Sharma appreciated the initiatives of Science City, Kapurthala in promoting creativity and innovation. He expressed that such programmes encourage competitiveness and entrepreneurship among young



students and motivate them to take up careers in science and technology.

He emphasized that the initiative to organize the Tech Fest is indeed commendable and in conformity of what India is gearing up for. These programmes will effectively support new national program designed to transform India into a global manufacturing hub.

Cash Prizes ranging from Rs. 1000 to Rs. 25,000 were awarded to the winners and certificates were awarded to all participants.



## Days & Events

### World Earth Day (April 22, 2016)

Science City celebrated World Earth Day on April 22, 2016. On this occasion well known environmentalist, Dr Arundee Ahluwalia, Former Professor (Deptt. Of Geology, Panjab University), Environment Outreach Incharge, Panjab University interacted with over 200 students and teachers from about 100 schools across Himachal Pradesh. These students were the winners of Space Science Olympiad conducted in various schools of Himachal Pradesh. Dr. Arundee Ahluwalia shared his valuable views on minimizing air, water and soil pollution and the need for management of all natural hazards through building societal scientific temper and sustainable use of science and technology in villages.

### International Biodiversity Day (May 21, 2016)

International Day for Biological Diversity was celebrated at Pushpa Gujral Science City, Kapurthala on May 21, 2016. A state-level function was organized in collaboration with Punjab Biodiversity Board, Chandigarh. Over 200 students and biodiversity management committee (BMC) members from different districts

of Punjab participated. Expert lecture was delivered by Dr Onkar Singh, Asst. Professor, Deptt of Zoology and Environmental Sciences, Punjabi University, Patiala. He apprised the participants that we are losing almost 50 species per day all over the globe due to various activities like forest fire, deforestation, all types of pollution, loss of habitat, scarcity of food, poaching, loss of reproductive efficacy due to rise of temperature, loss of reproductive efficacy due to infestation of pollutants in the ovaries of the organisms, etc. Further, he cautioned that rapidly rising greenhouse gases are driving earth ecosystems toward conditions not seen for million of years, with an associated risk of fundamental and irreversible ecological transformation.

### World Environment Day (June 05, 2016)

World Environment Day was celebrated at Pushpa Gujral Science City, Kapurthala on June 05, 2016. The theme of Environment Day -2016 was "Zero Tolerance for the Illegal Trade in Wildlife". A state-level function was organized in collaboration with Punjab Pollution Control Board (PPCB), Patiala.

Over 400 students and officers of PPCB and forest department from different districts of Punjab participated. Sh. Manpreet Singh, IAS, Chairman, PPCB was the Chief Guest at the occasion. Expert lecture was delivered by Sh. R.K. Luna, Additional Principal Chief Conservator of Forest (Retired), Govt. of Punjab in which he informed that in Africa alone between 2010 and 2012, one lakh elephants have been killed by poachers. In India, Great Indian Rhinoceros and Royal Bengal Tiger are under constant threat of extinction due to illegal trade of their body parts including horns, bones, teeth, and skin which are smuggled through international border.

### International Yoga Day (June 21, 2016)

Yoga is a 5,000-year-old physical, mental and spiritual practice. Having its origin in India, it aims to transform both body and mind. On December 11, 2014, the United Nations General Assembly declared June 21<sup>st</sup> as the International Day of Yoga. Science City observed the day wherein the employees performed mass yoga led by a professional Yoga trainer.



## Earth Day-2016



## Biodiversity Day-2016



## Environment Day -2016



## International Yoga Day -2016



## International Day for Disaster Reduction(October 13, 2016)

Pushpa Gujral Science City celebrated International day for Disaster Reduction on October 13, 2016 in collaboration with Ministry of Earth Sciences, Gol involving participation by large number of students in Debate and Photography Competitions. Expert lecture was delivered by Dr. Raman Chawla, Chief Cardiologist and Director, Care Max Hospital, Jalandhar, wherein he emphasized about the importance of first aid during an accident and heart attack. Dr. Chawla also talked about on how adopting a good life style like regular

walk, avoiding intake of oily food and keeping the blood pressure and sugar level within normal range makes life healthy and happy.

## National Environment Awareness Campaign (January 27, 2017)

National Environment Awareness Campaign was organized in collaboration with Punjab State Council for Science and Technology and was sponsored by Ministry of Environment, Forest and Climate Change, Gol. The theme of the event was Combating Desertification, Land Degradation and Drought. Sh. G.S Dhillon, Map Officer,

Department of soil and water conservation, Punjab delivered an expert lecture on the theme. Approximately, 100 students participated in the event. Dr. Dhillon apprised the participants on the major causes of land turning into a desert. He cautioned that Punjab primarily an agrarian economy and the food bowl of country is also facing a threat of desertification and has now highest percentage of blocks categorized as over-exploited in terms of ground water exploitation. Activities like Demonstrations on Rain water harvesting, vermi composting, nature walk, tree plantation and show on climate change were organized.



*Pics Left:  
International  
Day for  
Disaster Reduction  
2016*



*Pics Right:  
National  
Environment Awareness  
Campaign*



5th & 6th All Breed Open

# DOG SHOW

(January 22, 2017)

Pushpa Gujral Science City Kapurthala organized 5th & 6th All Breed Open Dog show with an objective to bring awareness in the society about domesticated biodiversity with a focus on various breeds of dogs. Over 70 dogs of 35 breeds participated in the dog show. Owners of dogs from Punjab and other states exhibited their pets and their skills during the show. 15 stalls related to dog food and dog medicines were set up.

Dr. Rajesh Grover, Director, Pushpa Gujral Science City, Kapurthala presided over the function and emphasized on the need to bring awareness about salient features of various breeds of dogs in the society. Brig. R. Panicker, Station Commander, Kapuarthala, was the Chief Guest on the occasion. In his address, he talked about the role of dogs in the army. The Judges of the Show were Sh. Brijesh Kumar from Delhi and Dr. Sulbha Jindal from Ludhiana.







# FLOWER SHOW

(March 04, 2017)

Pushpa Gujral Science City

organized Flower Show with an objective to raise awareness on floral biodiversity of the region. Dr. Prem Kumar, Vice Chancellor, GNA University, Phagwara was the Chief Guest of the occasion. Dr. Kumar expressed his views on the role and importance of flowers in our lives; how they make us happy and cheerful in every situation of our life. He emphasized that this event will inspire the society regarding the importance of growing flowers and conservation of environment and at the same time it will promote a spirit of fun. Further, setting up of flower show is a cooperative venture which combine the skills, knowledge and enthusiasm of several individuals. Dr. Rajesh Grover, Director, Science City mentioned that studies indicate that Punjab harbors about 2000 wild species of flowering plants (angiosperms), besides, a large number of species and varieties of floricultural and horticultural importance. More than 550 participants registered for this event. This event gave an opportunity to the visitors to enjoy the spring season in its full grandeur and to appreciate the floral biodiversity. Students of different educational institutions also presented Gidha, Bhangra & Gatka.



## World Wetlands Day (February 02, 2017)

Pushpa Gujral Science City celebrated World Wetlands Day in collaboration with Ministry of Earth Sciences involving participation of approx. 300 students in different competitions. Following activities were organized to commemorate this celebration:

- Expert lecture by Sh. Biman Basu, Former Scientist, CSIR-NISCAIR and Eminent Science Communicator on Wetlands Importance and its Conservation.
- Expert lecture by Mrs. Gitanjali Kanwar, Senior Project Officer, WWF from Hari Ke Pattan on Wetlands of Punjab.
- Painting Competition
- Photography Contest
- Documentary Show

## Blood Donation Camp ( March 20<sup>th</sup>, 2017)

On the occasion of its 12<sup>th</sup> foundation day celebrations, Pushpa Gujral Science City organized a blood donation camp in collaboration with Red Cross Society, Kapurthala. A team of doctors from Civil Hospital, Kapurthala was also present. Dr. Rajesh Grover, Director, Science City, Kapurthala expressed his gratitude to the donors and said that many people lose their lives due to shortage of blood during medical emergencies and such camps ensure people in distress get life saving blood. Sh. R.C Birha, Secretary, Red Cross Society Kapurthala and Sh. Ramesh Chandra, Assistant Secretary were also present on this occasion. The donors were awarded with certificates and badges.



**World Wetlands Day-2017**

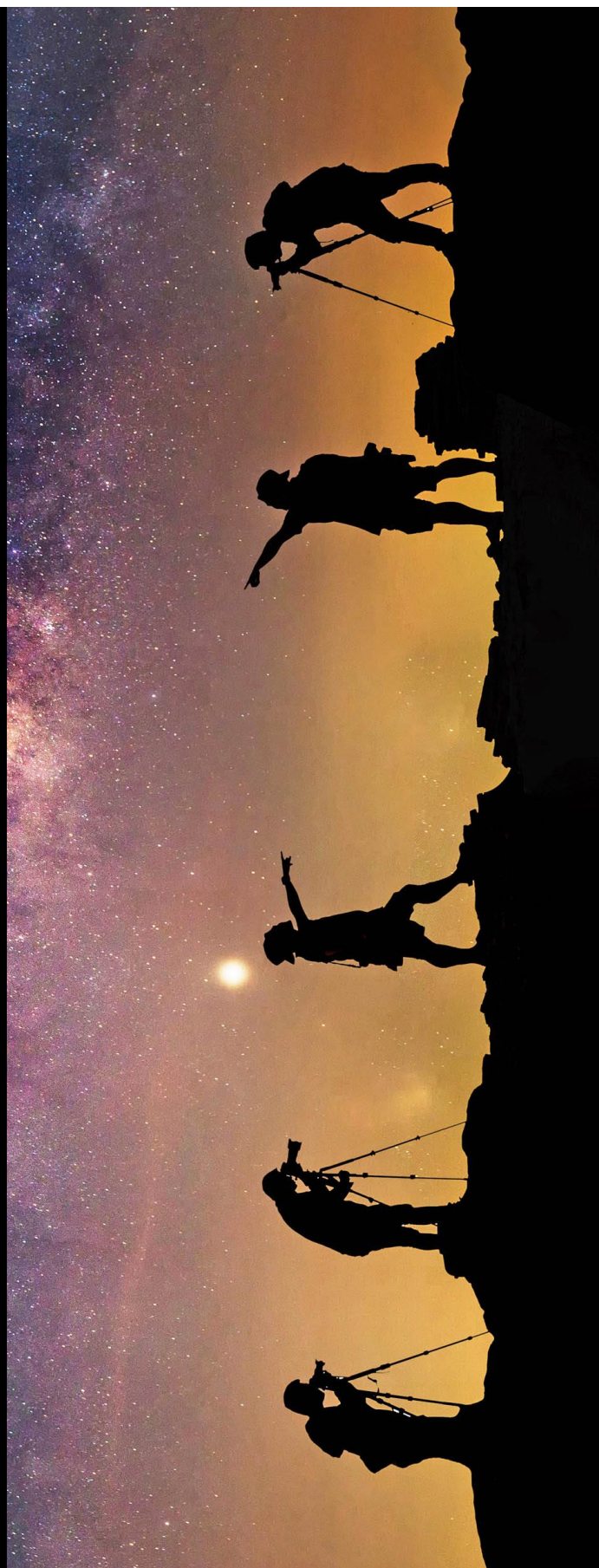
## Blood Donation Camp





### ***Wonders Of The Universe : Night Sky Watching***

Under Night Sky Watching programme, Star gazing activities are organized through powerful telescopes. Here one can view the craters on moon surface, Rings of Saturn, Phases of Venus, Jupiter, Mars etc. Science City keeps a track of major celestial events and update the schools regularly. Night Sky watching is arranged for the interested schools/visitors at Science City complex or at the institution's premises. Science City organized Night sky watching for approx. 1781 students of different schools at Rajindra International School (Tarntaran), Chitkara College of Education ( Rajpura), Hathi Complex (Ludhiana), Army School (Gurdaspur),MGN School (Jalandhar) and Govt. Sr. Secondary School, Qaudian Wali (Jalandhar) during 2016-17.





## *Exhibitions & Fair*

### **CII Chandigarh(October 21-24 ,2016)**

Science City participated in the Trade Fair organized by Confederation of Indian Industry in Chandigarh from 21.10.2016- 24.10.2016 for the promotion of Science City by putting up an interactive stall.

PGSC section was one of the major highlight of the Punjab Pavilion at the fair. More than 3 lac visitor visited the stall and collected information about Science City.



### **India International Trade Fair (November 14-27,2016)**

PGSC participated in International Trade Fair, 2016 (Punjab Pavilion) at Pragati Maidan, New Delhi from November 14 to November 27, 2016 organized by Indian Trade Promotion Organization, New Delhi. IITF is the largest integrated trade fair of the Indian subcontinent. A number of Government Organizations uses this platform to spread awareness about their programmes and policies among the public.



IITF-2016

### **Multimedia Conclave (March 29,2017)**

To promote Science City outside Punjab among tours and travels operators in Delhi, PGSC organized Multi Media Conclave on 29.03.2017 at Punjab Bhavan, New Delhi. Participants appreciated Science City presentation and ensured to promote and make it part of itinerary for their clients



**Multimedia Conclave**



## Internet Buzz

### ■ Website And Linkages

PGSC Facebook page daily gets suggestions, recommendations and likes from the visitors. The facebook page is updated on regular basis about science and technology news/days/events and various features of Science City. The page has more than 5500 likes. Science City is also present on twitter.

### ■ E-Newsletter

Science City released various editions of quarterly e-newsletter BUZZER. The newsletter highlights forthcoming events, events organized in the past quarter, Ticket prices, various schemes, and other facilities available at the Science City. Science City regularly sends newsletter to schools & colleges, corporate, tour operators etc all over the northern region.

### ■ E-Marketing

In today's internet age, building an online presence is imperative for all businesses to be competitive. Science City is well aware of this fact and is thus, actively involved in e-marketing like sending updates, promotional material, membership schemes, promoting Night Sky Watching Activity etc.

- E-mails for the promotion of PGSC was sent to 3045 schools of Chandigarh, Punjab, Haryana, Himachal Pradesh, Jammu & Kashmir, Delhi.
- E-mail to colleges affiliated with PTU was sent for mobilizing the students to take benefit of the sponsorship scheme of PTU.



## Conferences

- Dr. Rajesh Grover, Director, PGSC attended 15<sup>th</sup> All India Directors Conference organized by NCSM at Regional Science Centre, Jaipur from December 9-11, 2016 and made a presentation on STEM programme-A PGSC Way.

## Publications

- "Impact of Vernacular languages in effective science communication" in **International Journal of Science and Research** (Communicated)
- "Innovation at grass root level : A key to sustainable development-A Pilot study" in **Journal of Scientific Temper**.(Communicated)
- "Reaching out to the Unreached: Mobile Science Exhibition" in **Journal of Scientific Temper** (Communicated)
- "Climate Change: A call for awareness" in **DREAMS** magazine published by Vigyan Prasar (Accepted)
- "Impact of Health Gallery in building Scientific Temper and Learning Experience among Adolescent Rural Students of Punjab" in **Indian Journal of Science Communications** (Communicated)
- "Challenges and Opportunities for Sustainability in a Science Museum - A Case Study" in **Journal of Innovative Thoughts** ( Published)
- "Science Museum and Society - A Case Study" in **Cognitive Discourses** (International Multidisciplinary Journal), Volume 4 Issue 2 September 2016



## Computer Training Programme

Pushpa Gujral Science City established a Computer Centre with the latest equipment manned by highly qualified and experienced staff. In order to serve the community, PGSC has started a Computer Awareness Training Programme at nominal rates for students and general public. The participants of this training programme include students, senior citizens, housewives and general public from adjoining areas. The training is imparted with the help of multimedia projection system. The course content includes PC setup, Word processing, Multimedia Presentation, Hands on experience on Internet, E-mail etc. Certificates are awarded after the successful completion of the programme. IT primer basic computer training batch of 24 students from Kapurthala and nearby villages was started from 02 May 2016. The duration of the training was 10 weeks.

## Banner Display

PGSC regularly displays banners with background information on special days like:

World Wetland Day	2 February
World Cancer Day	4 February
Birthday of Thomas Alva Edison	7 February
Birthday of Charles Darwin	11 February
World Radio Day	12 February
Birthday of Galileo Galilei	15 February
Birthday Albert Crewe	18 February
Birthday of Copernicus	19 February
Birthday of S.S. Bhatnagar	21 February
National Science Day	28 February
World Wildlife Day	3 March
International Women's Day	8 March
Albert Einstein	14 March
World Sparrow Day	20 March
World Forestry Day	21 March
World Water Day	22 March
World Meteorological Day	23 March
World Health Day	7 April
World Homeopathy Day	10 April
International Day of Human Space Flight	12 April
World Health Day	7 April

World Homeopathy Day	10 April
International Day of Human Space Flight	12 April
World Aeronautics & Cosmology Day	14 April
World Hemophilia Day	17 April
Indian's 1 <sup>st</sup> Satellite Launched – 1975	19 April
International Earth Day	22 April
World Asthma Day	3 May
World Red Cross Day	8 May
National Technology Day	11 May
World Telecom Day	17 May
International Biodiversity Day	22 May
World No Tobacco Day	31 May
World Environment Day	5 June
World Ocean Day	8 June
World Blood Donor Day	14 June
International Yoga Day	21 June
National Statistics Day	29 June
National Doctors Day	1 <sup>st</sup> July
World Population Day	11 <sup>th</sup> July
International Biodiesel Day	10 <sup>th</sup> August
National Sports Day	29 <sup>th</sup> August
Birthday of Sir Ernest Rutherford	30 <sup>th</sup> August
National Teacher Day	5 <sup>th</sup> September
Birthday of John Dalton	6 <sup>th</sup> September
Engineers Day	15 <sup>th</sup> September
World Peace Day	21 <sup>st</sup> September
Birthday of Sh. Satish Dhawan	25 <sup>th</sup> September
World Tourism Day	27 <sup>th</sup> September
World Heart Day	29 <sup>th</sup> September
Neil Bohr Day	7 <sup>th</sup> October
Birth anniversary of C.V Raman and Marie Curie	7 <sup>th</sup> November
World Science Day	10 <sup>th</sup> November
Children's Day, World Diabetes Day	14 <sup>th</sup> November
Birth anniversary of Edwin Hubble	20 <sup>th</sup> November
World Television Day	21 <sup>st</sup> November
Birth anniversary of J Vender Waals	23 <sup>rd</sup> November
World AIDS Day	1 <sup>st</sup> December

## *Science City in media*

### *Electronic media*

- Interview of Public Relations Officer, Science City on AIR, Bathinda on 15-6-2016
- Recording of National Program for AIR on 27/6/2016 ( Broadcasted on 8-7-2016)
- Programme on Skill Development telecast on 13/7/2016 on DD Jalandhar
- DD Jalandhar Programme on PGSC telecast on 15/12/2016
- PGSC promotional Interview on RAIDO MANTRA, Jalandhar on 10-12-2016
- Story on Mukh Mantri Vigayan Yatra telecast on DD News on 3-9-2016
- Story on Mukh Mantri Vigyan Yatra telecast on PTC News on 8.30 pm News Bulletin on 30-7-2016.
- Promotional Campaign started on My FM from 1/2/2017
- Telecast of Documentary on Science City on DD Punjabi 20/2/2017

### *Print Media*

- News on Moving Dinosaurs published in Dainik Jagran and Punjabi Jagran on 10-7-2016.
- News feature published in The Tribune on Mukh Mantri Vigayan Yatra, 13/7/2016
- Article published in The Tribune Sunday Spectrum on July 24,2016
- Aerial view photo of Science City published in Dainik Bhaskar, October 09, 2016
- PGSC news feature on year end 2016 published in The Tribune on December 19,2016
- PGSC news feature on year end 2016 published in Hindi and Punjabi Newspaper on December 20,2016
- Promotional article published in Nirantar Soch Magazine, February Edition
- News Feature published in Daily Ajit on March 10,2017
- Article on Climate Change Theatre published in Ajit Magazine, March 12,2017
- News feature published in Daily Ajit on March 10,2017
- Photo feature published in HT on March 31,2017

### **Wide coverage of the following programmes organized at Science City in print as well as in electronic media:**

- Earth Day-2016
- International Bio-diversity Day -2016
- Environment Day-2016
- 5<sup>th</sup> Nature Guidance Camp-2016
- Disaster Reduction Day-2016
- Dog Show-2017
- National Environment Awareness Campaign
- Wetlands Day-2017
- Flower Show
- INNO-TECH- 2017







# ਫੁੱਲਾਂ ਦੀ ਸੁਗੰਧ ਨਾਲ ਮਹਿਰੀ ਸਾਇੰਸ ਸਿਟੀ ਬਣਾਉਣਾ

ਸ਼੍ਰੀ ਮਹਾਰਾਜਾ ਗੁਰਪ੍ਰਸਾਦ ਸਿੰਘ ਆਰਟਸ ਸਕੂਲ, ਲੁਧਿਆਣਾ ਦੇ ਪ੍ਰਧਾਨ ਦਸ ਦਸ ਸਾਲ ਦੀਆਂ ਬੱਚੀਆਂ ਨੇ ਸਾਇੰਸ ਸਿਟੀ ਦੀ ਸ਼ੁਰੂਆਤ ਕੀਤੀ

## ਸਿਟੀ ਮੇਂ ਨਵਰਥਰ ਸੇ ਨਵੀਂ ਗੈਲਰੀਆਂ

ਸ਼੍ਰੀ ਸਾਇੰਸ ਦੀ ਬਾਰੀਕਦਸ਼ੀ



ਸ਼੍ਰੀ ਸਾਇੰਸ ਦੀ ਬਾਰੀਕਦਸ਼ੀ



ਸ਼੍ਰੀ ਸਾਇੰਸ ਦੀ ਬਾਰੀਕਦਸ਼ੀ



ਸ਼੍ਰੀ ਸਾਇੰਸ ਦੀ ਬਾਰੀਕਦਸ਼ੀ

कपूरथला की पुष्पा गुजराल साइंस सिटी में पहले बनाए गए डायनासोर के स्केलपवर्



## *Financial Statement*

### Operational Days & Visitors(April 2016-March 2017)

Item	2016-17
No. of days	364
No. of Visitors	4,08,591

### Operational Expenses during the year 2016-2017 (Amount in Lacs)

Items	Expenditure
Salary & Allowances	445.06
Administrative expenses	27.68
Operation & Maintenance expenses	145.81
<b>Total</b>	<b>618.55</b>

### Revenue generated during the year 2016-2017(Amount in Lacs)

Items	Income
Sale of Tickets	612.23
Sale of Parking Tickets	10.95
Lease /rent/space selling/sponsorship	22.48
Commission receipt (Souvenir Shop)	1.91
Commission receipt (Boating Sale)	3.33
Commission receipt (Trackless train)	1.67
Commission receipt (Photography)	2.60
Computer Classes	0.31
Membership Fee	4.47
Receipt from Guest House/Convention Hall	6.58
Night Sky Watching	0.76
Miscellaneous	8.95
<b>Total</b>	<b>676.24</b>

# Annexures



## Members of PGSC Society

1.	Minister- In -charge of Science & Technology, Punjab Civil Secretariat, Chandigarh	12	Director, National Institute of Technical Teachers Education & Research, Sector 26, Chandigarh
2.	One Minister from Punjab Govt. Punjab Civil Secretariat, Chandigarh	13	Director Terminal Ballistic Research Laboratory, Sector 30, Chandigarh – 16002
3.	(One Member Lok Sabha, Punjab)	14	Director, Confederation of Indian Industry (CII), Northern Region, Sector 31-A, Chandigarh-160047
4.	(One Member, Rajya Sabha, Punjab)		
5	Sh. Naresh Gujral, 5-A, Amrita Shergill Marg, New Delhi-110003	15	Director, NIPER, Phase-X, Mohali
6	Chief Secretary to Govt. of Punjab, Punjab Civil Secretariat, Chandigarh	17	Secretary to Government of India, Ministry of Culture, Shastri Bhawan, New Delhi
7.	Principal Secretary, Deptt. of Finance, Govt. of Punjab Punjab Civil Secretariat, Chandigarh	18	Head NCSTC, Deptt. of Science and Technology, Technology Bhavan, New Mehrauli Road, New Delhi
8	Director, National Institute of Technology, Jalandhar	19	Financial Advisor, Ministry of Culture, Shastri Bhavan, ,New Delhi-110001
9	Director, Central Scientific Instruments Organisation, Sector 30, Chandigarh	20	Vice Chancellor, Punjab Technical University, Jalandhar-Kapurthala Road, Kpt
10	Director National Agri-food Biotechnology Institute, Phase VIII, Industrial Area, Mohali	21	Vice-Chancellor, Central University of Punjab, Bathinda
11	Director IISER, Sec 81, SAS Nagar	22	Vice Chancellor, Guru Nanak Dev University, Amritsar

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| <p>23. Vice Chancellor,<br/>Punjab Agriculture University,<br/>Ludhiana 141004</p> <p>24. Vice Chancellor,<br/>Punjabi University, Patiala</p> <p>25. Vice Chancellor,<br/>Panjab University, Sector 14,<br/>Chandigarh-160014</p> <p>26. Vice Chancellor,<br/>Baba Farid University of Health Sciences,<br/>Faridkot</p> <p>27. Principal Secretary,<br/>Deptt. of Science, Technology and Environment,<br/>Mini Secretariat, Chandigarh</p> <p>28. Principal Secretary,<br/>Deptt. of Industries, Govt. of Punjab,<br/>Udyog Bhawan, Sector 17, Chandigarh</p> <p>28. Secretary,<br/>Deptt. of Higher Education ,Govt. of<br/>Punjab</p> | <p>29. Secretary,<br/>School Education, Govt. of Punjab</p> <p>30. Director<br/>Science City,<br/>Kolkata-700046</p> <p>31. Chairman,<br/>State Board of Technical Education,<br/>Punjab</p> <p>32. Director,<br/>National Science Centre,<br/>New Delhi- 110001</p> <p>33. Executive Director,<br/>Punjab State Council for Science &amp;<br/>Technology, Chandigarh</p> <p>34. Director General/Member Secretary<br/>Pushpa Gujral Science City<br/>Kapurthala</p> |
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## Members of the Governing Body

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|--|---|
| 1. Chief Secretary to Govt. of Punjab,<br>Punjab Civil Secretariat, Chandigarh                           | 12 Director General<br>CSIR, Anusandhan Bhawan,<br>2, Rafi Ahmed Kidwai Marg, New Delhi – 110 001           |
| 2 Sh. Naresh Gujral,<br>5-A, Amrita Shergill Marg,<br>New Delhi – 110001                                 | 13 Vice Chancellor,<br>Punjab Technical University,<br>Jalandhar  |
| 3 (One MP from Punjab Govt.)   | 14 Chairman,<br>CII, Northern Region, Sector 31-A, Chandigarh-160047  |
| 4 (One MLA from Punjab Govt.)  | 15 Head, NCSTC, Deptt. of Science and Technology,<br>Technology Bhavan, New Mehrauli Road, New Delhi-110016 |
| 5 Secretary to Government of India,<br>Ministry of Culture,<br>Shastri Bhawan, New Delhi                 | 16 Executive Director,<br>Pb. State Council of Sc. & Tech., MGSIPA Building,<br>Sector-26, Chandigarh       |
| 6 Secretary to Govt. Of Punjab<br>Deptt. Of Science and Tech & Env.<br>Punjab Civil Sectt. 2, Sec 9, Chd | 17. Editor, Daily Ajit (Punjabi) and AjitSamachar(Hindi),<br>Nehru Garden Road, Jalandhar City              |
| 7 Principal Secretary<br>School Education<br>Punjab Civil Sectt. 2, Sec 9, Chd                           | 18. Joint Editor, Hind Samachar Group / Punjab Kesari,<br>Civil Lines, Jalandhar                            |
| 8 H.H. (Brig.) Sukhjot Singh,<br>The Villa, Kapurthala   | 19 Chief Editor, Daily Post<br>Chandigarh   |
| 9 Vice Chancellor,<br>Central University of Punjab,<br>Bathinda, Punjab                                  | 20 Director,<br>National Science Centre, Near Pragati Maidan<br>Gate No. 1., New Delhi                      |
| 10 Vice Chairman,<br>CRRID, Sector-19-A, Madhya Marg, Chandigarh   | 21 Director,<br>NIPER, Phase-X, Mohali  |
| 11. Director<br>Central Scientific Instruments Org.,<br>Sector 30, Chandigarh – 160020                   | 22 Principal Secretary,<br>Tourism, Govt. of Punjab,<br>Punjab Civil Secretariat - II Sector 9 ,Chd         |

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| 23 | Financial Advisor<br>Ministry of Culture, Shastri Bhavan, New Delhi   | 27 | Deputy Commissioner,<br>Kapurthala  |
| 24 | Director<br>Terminal Ballistic Research Laboratory,<br>Sector 30, Chandigarh  | 28 | Vice Chancellor<br>Maharaja Ranjit Singh State Technical University<br>Punjab |
| 25 | Director,<br>National Institute of Technology,<br>Jalandhar   | 29 | Director General/Member Secretary<br>Pushpa Gujral Science City<br>Kapurthala |
| 26 | Director General<br>Sardar Sawarn Singh National Institute<br>of Bio-Energy ,Jalandhar-Kapurthala Road,<br>Kapurthala |    |   |



