

Capsule 37

APRIL-JUNE 1995

First Science Centre for Madhya Pradesh

On January 12, 1995, President of India Dr Shanker Dayal Sharma dedicated to the nation the Regional Science Centre at Bhopal, Madhya Pradesh. The first of its kind in the state, this is the 22nd centre set up by the National Council of Science Museums.



Inauguration stone being unveiled by the President of India with Chief Minister and Governor of Madhya Pradesh and Minister of HRD, Govt of India looking on

Also present on the inaugural day were the State Governor Mohd. Shafi Qureshi, Chief Minister Shri Digvijay Singh, Union Dy Minister for Human Resource Development Ms Selja, State Minister for Science and Technology Dr Vijayalaxmi Sadho and Dr Saroj Ghose, Director General of NCSM.

In his speech, Dr Sharma called upon scientists, teachers and students to develop a simple and natural language of science. He expressed gratitude at the efforts of the NCSM in promoting and popularising science through its science museums. He also hoped to see the establishment of many more such museums and the expansion of the fleet of mobile science exhibition units in the rural areas.

Governor Mohd. Qureshi said that young scientists trained in the Centre would share their experience with the people in every corner of the state and create further interest in science.

Other dignitaries also expressed their hopes and expectations. Shri Digvijay Singh hoped that the Centre would create mass awareness; Ms Selja expressed the need for spreading science and technology to speed up the socio-economic development of the country; Dr Ghose elaborated on the activities and objectives of the Council and reminded how the Centre was set up well in time in spite of extremely difficult site conditions. He also announced that only 50 per cent of the activities of the Centre will be taking place here while the other 50 per cent shall be conducted outdoors through outreach programmes and interaction with people in the rural areas.



President Sharma shares a smile with a young enthusiast

Ms Vijayalaxmi Sadho released the brochure on the Science Centre.

Later, the dignitaries were taken on a tour of the Science Centre and the adjoining Science Park.

The Science Centre is spread over an area of five acres down



Inauguration by lighting the lamp

the slope of the popular Shamla Hills. There are indoor exhibition halls as well as an open air Science Park. There are two major galleries: *Inventions* and *Fun Science*.

Gallery *Inventions* houses a number of exhibits explaining the process of human progress through the intelligent use of the various inventions. The landmarks in the timetable of inventions have been displayed in an interactive mode. An idea is given how one invention paves the way for more or better ones by further development of machines, instruments or products. One gets a perfect picture of how human civilization has been shaped and reshaped through the various inventions viz. harnessing of steam power to operate locomotives, the working of a gramophone, electroplating, sending

INAUGURATION



President Sharma is surprised by Dr Ghose's demonstration of Loop-the-Loop

communication signals through optical fibre, a pendulum clock, the camera and lots more.

Gallery *Fun Science* is a fully interactive gallery on physical sciences. Here one can handle the exhibits, try several given options, and revel in the discovery of scientific phenomena. Subjects like mechanics, mathematics, optics, magnetism, electricity and sound are grasped easily.

The exhibits have been so interestingly presented that even a person as erudite as President Dr Shanker Dayal Sharma was attracted and he watched with pleasure the defying of gravity by the rolling ball in 'Loop the Loop' or the slowing down of the magnetic disc and bar in the 'Lazy Channel' and the 'Lazy Tube' respectively.

This Science Centre will play a significant role in introducing the general public to the frontier fields of science and technology. Exhibitions of top international

quality and socially relevant topics like "Global Changes" and "Viswaroopa" are on display. The glamorous exhibition titled "Global Changes" depict through participatory display, the significant environmental changes our planet has experienced in the past and the impact of the growth of human population that have greatly accelerated the slow process of natural changes. In the "Viswaroopa" exhibition, one gets a full picture of interrelated ecological systems in the universe. Diversity in Unity and Unity in Diversity are the main themes in this exhibition. Stress has



Science Park has enough attraction for all

been laid to bring out the fact that every bit of live and inanimate entities in this universe is indispensable for a balanced co-existence.

The other large exhibition tells the story of the Himalayas. All aspects of this great mountain range has been shown through attractive exhibits depicting the geology, flora and fauna, land and people, customs and culture.

The two acre Park has 50 interesting exhibits on mechanics, sound, optics, etc. A corner has been devoted to live animals and an aviary. The Centre also has the facilities for educational programmes



President Sharma watching in disbelief the Lazy Tube exhibit

such as teacher training workshops, creative ability centres, science demonstration lectures, science film shows, popular science lectures, etc. Also available with the Centre is the inflatable dome planetarium called *Taramandal*. The Mobile Science Exhibition unit attached to this Centre has already started travelling and has become a popular attraction in the rural as well as tribal belts.

Going by the initial interest of the local people it can be said that the Science Centre has been able to generate enough enthusiasm. It might be well to remember that the major work for setting up the Science Centre started in early 1991. The land was provided free of cost and the Centre was built at a cost of Rs.3.05 crores. Madhya Pradesh State Council of Science and Technology have also committed a share of 50 per cent of the capital cost for setting up the Science Centre.



Chief Minister Digvijay Singh enjoying a moment on the Elliptical Carrom Board. Mohd. Shafi Gureshi, Governor looks on



Ma Selja, Dy Minister curiously watching the atomic structure in Invention Hall

SCIENCE FAIR

Every year, the Science Fair is getting more and more popular. Not only there has been a growth in the number of participants but also in the number of visitors who come to the Fair. Here is a sample of the many fairs that took place at the district, state and regional levels.

The *Eastern India Science Fair* was held at **Birla Industrial & Technological Museum, Calcutta** between Jan 20 and 24. Shri Subhas Chakraborty, Minister-in-Charge of Sports and Youth Services and Tourism, Govt of West Bengal, inaugurated the Fair while Prof. Dwijesh Dutta Majumdar, Professor Emeritus, ISI and Emeritus Scientist, CSIR was the Chief Guest. On the valedictory day, Prof. D K Sinha, Rashbehari Ghosh Professor of the University of Calcutta was the Chief Guest and also gave away the prizes. All the education directorates of the eastern region states (including Andaman & Nicobar islands) assisted in the programme along with Dept of Sports and Youth Services, Govt of West Bengal, BITM and NCSM.

The seventh *Western India Science Fair* (94-95) was successfully organised by **Nehru Science Centre, Bombay** in collaboration with the Education Depts of Govt of Maharashtra, Gujarat, Goa, Madhya Pradesh

and Union Territory of Daman & Diu, Dadra & Nagar Haveli and Dept of Science & Technology, Rajasthan during Nov 23-27, 1994. This year Science Fair was attended by the participants of all the states and U.Ts of Western India except U.T. of Dadra & Nagar Haveli.

In all 86 students and 67 teachers who were the winners of the state/U.T. level Science Fair in the respective state/U.Ts participated in the Fair. 49 students'



projects and 19 teaching aids were on display.

Some of the projects appreciated by the visiting public were models on Amla Fruit Pricker, Three in



One, Solar Water Heater, Generation of Electricity from Urine, etc. Teachers also presented some new teaching aids like Cell Division Mitosis, Graph Calculator, Cell Division Mitosis & Meiosis, Concentration, Reduction and Purification model for Metals, Atomic structure and periodic wheel etc.

This year Scientific Book & Toy Fair was also organised during the Science Fair period.



Regional Science Centre, Lucknow held the Science Festival 1995 during Feb 25-28. UNICEF and NEDA also co-operated. On the inaugural day, Dr Sushil Kumar, Director, Central Inst of Medicinal and Aromatic Plants opened the Festival while Shri R K Singh, Secretary, Science & Technology, Govt of Uttar Pradesh, presided over the function. Shri Ashok Priyadarshi, Cane Commissioner of Govt of U.P. gave the valedictory address and also distributed prizes. Besides the usual items like competitions on science models, poster drawing, quiz, science experiments, one-act plays and popular lectures, there was leaf identification competition and a cooking competition through solar cooker organised by NEDA. Puppet shows, 'Nukkad Nataks' and anti-superstition demonstrations, film shows and Taramandal shows were the other attractions.

Between Dec 28 and 30, the *Assam State Science Fair* was



SCIENCE FAIR



organised by the **Regional Science Centre at Guwahati**. In fact this was the Centre's maiden venture. Nearly 102 students from 43 schools of different districts of Assam participated with nearly 60 models. Prof. S D Phukan, Director of Science and Technology, North-Eastern Council, Shillong



inaugurated the Fair and Dr Anil Kumar Goswami, Director of Assam Science, Technology and Environment Council presided. On the valedictory day, Mrs Tilottama Barooah, Director of Secondary Education delivered the speech and also gave away prizes. In the Fair, the regional office of the Ministry of Non-Conventional Energy Sources (Govt of India) displayed various non-conventional energy systems like solar lights, solar cookers, biogas plants, etc.

The Chittoor District Science Fair and Educational Exhibition was organised between Nov 16 and 19 at the S. P. Girls' High

School, Tirupati. The Fair was inaugurated by Shri T Janardan Naidu, IAS, Vice-Chairperson, TUDA, Tirupati. The guest of honour was Dr K Sashidharan, Professor and Head of Dept of Urology at S. V. Inst of Medical Sciences, Tirupati. Dr N Gangaiah, Regional Jt. Director of School Education, Cuddappah presided over the function. On the valedictory day, Shri Venkateswarlu, IAS, District Collector, Chittoor was the Chief Guest while Smt. Kamala Menon Cochran, Devasthanam Educational Officer, T.T.D. was the Guest of Honour and distributed medals and certificates. Shri T Chengaiah, District Educational Officer, Chittoor presided.

District Science Centre, Purulia in collaboration with BITM, NCSM and District Youth Office, Purulia organised *District Science Fair* between Jan 16 and 18. On the inaugural day, Shri P C Sharma, Principal, Salnik School, Purulia was the Guest-in-Chief while Shri Zahid Ali, District Youth Officer from Dist. Youth Office, Purulia presided. On the valedictory day, Shri M K Dey, IAS, District Magistrate, Purulia was the Guest-in-Chief while Shri S Goswamy, Director, BITM presided. Besides the Fair, a film show and a cultural programme was also organised.

Bardhaman Science Centre organised the *District Science Fair* between Jan 13 and 15, in collaboration with Paschim Banga Vigyan Mancha and Bardhaman District Youth Office. On the inaugural day, Shri B B Ghosh, A.D.M. (Dev.) of Bardhaman was the President while Shri S Goswamy, Director, BITM was the Chief Guest. On the valedictory day, Shri Ramakrishna Bandopadhyay,

Sahakari Savadhipati, Zilla Parishad, was the President while Prof. G S Dey, Dean, Faculty of Sciences, Bardhaman University was the President.

District Science Centre, Tirunelveli organised District Science Fair at Kamarajar district between Oct 19 and 21. 14 schools participated.



Fair was also organised by DSC, Tirunelveli in collaboration with Tamilnadu State Education Dept at Tuticorin between Feb 16 and 18. It was inaugurated by Shri S Chandrasekaran, DSO and presided over by Shri John Fernando.



Gulbarga District Level Science Fair was organised in collaboration with D.D.P.I. office between Dec 20 and 22. Students from 24 schools participated with 65 models.

Birla Industrial & Technological Museum, Calcutta organised a popular lecture on Mar 10. Shri Swapan K De, Head, Computer & Elect. Group, Dept of Atomic Energy, Variable Energy Cyclotron Centre, Calcutta delivered a talk on 'E-Mail - Vehicle for Global Connectivity'. The lecture was highly informative and interesting.

BITM organised Practical Training for the II-year post-graduate students of Museology, University of Calcutta. The students prepared exhibition layout and a complete dummy (in scale) on the theme "Man Through Ages". Five students received the training between Feb 9 and 23.

On Feb 19, National Science Centre, New Delhi observed the inauguration of its 'Live Corner' by Dr Harsh Vardhan, Minister for Health and Family Welfare, National Capital Territory of Delhi.

The 37th Jamboree on the Air (JOTA) was held at **Nehru Science Centre, Bombay** on Oct 15 & 16, 1994. In all 109 scouts and guides including state officials from the Maharashtra State Bharat Scouts and Guides, South Bombay District participated in the event. The Amateur Radio Station VU2SCI of the Centre was operated during both the days. Scouts and Guides from India and Sri Lanka exchanged JOTA greetings, made self-introduction, talked of hobbies and songs in various languages.



Two Telescope Making Programmes were conducted by the Centre during Oct 25-Nov 2 and Nov 8-13. 16 enthusiasts participated in the first batch and 10 in the second batch. The participants were trained in grinding, polishing and silvering of 4" reflector and guided to make suitable mounting for making a 4" Newtonian Telescope.

The 'Festival of Environment' was organised by the Centre in collaboration with WWF India during Nov 29-Dec 3. Environment based film shows, essay competition, debate, quiz contest, painting competition and other programmes were organised during the week-long event.



Computer Awareness Programmes were organised by the Centre for school students during Oct 25-Nov 2 and Nov 8-13.

Ninth Anniversary day of the Centre was celebrated on Nov 11, 1994 by organising various educational programmes.

Vacation Hobby Courses were conducted by the Centre during the Diwali vacation for the school students, in the discipline of Physics, Chemistry, Life Sciences, Electronics and Art & Craft. In all 156 students participated in Vacation Hobby Course in the various subjects and completed 618 projects.

On Jan 21, the temporary exhibition 'Structures' was inaugurated at **Visvesvaraya Industrial & Technological**

Museum, Bangalore by Shri R Venkataraman, Chief Engineer, Civil Engineering Dept of ISRO.



Between Jan 18 and 27, **Raman Science Centre, Nagpur** conducted Teachers' Training Programme. 16 pre-D.Ed students from Priyanka College participated and fabricated eight students-friendly projects.



The Centre also organised the *Science Quiz Contest* for high schools and middle schools, between Nov '94 and Feb '95. In the 36 part contest, 194 students from 56 high schools and 41 middle schools participated.



Regional Science Centre, Guwahati collaborated with Lions Club of Dispur to hold the Centre's first anniversary programme between Mar 15 and 22. The week-long programme was inaugurated by Dr Pratul Goswami, Director, ASTE Council, Guwahati. There was a popular lecture on 'How to Save Ourselves from AIDS', a free Homœo Camp, free Eye Scanning Camp, free Medical Health Check-up, etc. Also arranged were astronomical observations and science quiz.

Regional Science Centre, Lucknow organised 'AIDS Week' between Dec 1 and 7 in collaboration with the local body called Rangapath and other welfare organisations.

Regional Science Centre, Bhopal organised various science popularisation programmes over the last few months. To mention a few: annual science quiz on Nov 22; a popular lecture on Advent of Electronics by Shri D Pal, Project Coordinator; a film show on Nov 23 as well as a popular lecture on 'Need for Environment and Protection and our Role Today' by Shri Alok Srivastava, Executive Director, Environment Planning and Coordination Organisation.

District Science Centre, Purulia observed Anniversary Week between Dec 15 and 21. The various programmes included special astronomy, bird watching, popular lectures, film shows and fun science.

The Sub-Regional Science Centre at New Digha, West Bengal collaborated with Zoological Survey of India and two NGOs - Prakriti Samsad of Calcutta and



Nature Observer of Dum Dum, to hold a Nature Study Camp between Oct 24 and 28. Under the guidance of seven experts, 38 students learned about various aspects of nature study through popular lectures and field trips, as well as field craft, camp maintenance, ethics and first aid.

On Dec 12, District Science Centre, Gulbarga, in collaboration with Indian Association of Family Physicians organised a state level conference.

The Centre also celebrated its Anniversary Week between Jan 6 and 11 with programmes to suit every interest. Among the many programmes, there was a teachers' training programme on 'identification of eye defects in children' as well as a programme highlighting the importance of eye donation; an inter-collegiate audio-visual quiz; a spot painting contest; a mathematical olympiad; popular science lectures, etc.

District Science Centre, Tirunelveli organised a teachers' training programme and CAC at Madurai between Aug 1 and 8. While teachers were trained to make useful teaching aids, students were trained in aspects of astronomy and electronics.

On Nov 7, the Centre observed C V Raman Birth Anniversary and also the inauguration of the temporary exhibition on Structures.

Between Dec 1 and 7, AIDS Week was observed under the theme 'Talk Aids - Stop Aids'. Rotary clubs, youth welfare depts and hospitals collaborated with the Centre to make the programme interesting and popular.

The eighth anniversary celebration of the Centre was organised between Feb 1 and 28.

On Feb 17, the Centre and its collaborating organisations observed the inauguration of Road Safety Year 1995. Programme highlights included road safety and first-aid demonstrations, debates, film shows and competitions.



Consumer Awareness Programme was organised for creating awareness about consumer products among the rural people on Feb 25 in collaboration with District Consumer Council. Shri R Mathivanan, Nehru Yuva Kendra, Tirunelveli inaugurated and delivered a popular lecture on adulteration. Shri Prabhakaran of DCC explained what are the problems common people face.





A workshop was organised for unemployed youth of Tirunelveli District in collaboration with District Employment Office, Tirunelveli on Jan 25. There was 120 participants.

Another self-employment training programme was organised between Feb 17 and 19, for unemployed rural youth selected by Nehru Yuva Kendra, Tirunelveli and Rural Welfare Centre, Manur.

Personality Development workshop on Effective Classroom Communication for school teachers of the District was conducted by Prof. Narashiman, Dept of Chemistry, St. Xaviers College, Palayamkottai on Feb 2.

District Science Quiz contest 94-95 was conducted for V O Chidambaranar district on Feb 18 in connection with Southern Tamilnadu Science Quiz contest 94-95.

Association of Science-Technology Centres (ASTC), USA honours teachers of various countries who have made exemplary use of their nearby science centre, its programmes and resources so as to improve the quality of science education in their schools.

Along with 55 teachers around the globe, Deepak P Kulkarni, Principal of National English School, Virar, was honoured by the ASTC. His name was proposed by Nehru Science Centre, Bombay.

On Feb 28, 1929, the 'Raman Effect' was discovered for which Prof C V Raman was awarded the Nobel prize in Physics. Since 1987, the Govt of India, has decided to observe Feb 28 as National Science Day with an objective to create scientific awareness among the general public and generate the spirit of inquiry and inculcate a scientific temper among the younger generations. The units of NCSM too observed the day in a fitting manner.

National Science Day was observed in **Birla Industrial & Technological Museum, Calcutta** on Feb 28 in which about 600 students of different schools of Calcutta, Howrah, 24-Parganas (South and North) districts participated. Open house quiz on the topic 'Our Scientists' in three levels saw a participation of 440 students. Identification of source of sound, a game on perception for children was arranged in the open air lawn. A group of about 120 students enjoyed the game. Make & Take was a hands-on event involving students to prepare low-cost experiments and scientific games out of easily available materials. Anti-superstition demonstration for all and Science Film Festival for school students were also arranged. Film Festival alone during Feb 28 - Mar 2 attracted some 1200 students and teachers. Hands-on model making, slide show on 'Universe' and sky watching through telescope were also arranged as a part of Astronomy Awareness programme.

Nehru Science Centre, **Bombay** had Dr A P Roy, Head, Spectroscopy Division of BARC, Bombay delivering the NSC-CV Raman Memorial Lecture.

Regional Science Centre, **Tirupati** observed a Science Festival with science related drama and music contests, quiz, workshops, physics olympiad, etc.

Srikrishna Science Centre, **Patna** saw the inauguration of the photo exhibition on life and works of Prof C V Raman as well as conducting Taramandal shows, debates and popular science lectures like 'A New Laser Age' by Prof R M P Sinha from Dept of Physics of Patna University.

Regional Science Centre, **Bhopal** arranged for a series of popular science lectures on topics like non-conventional energy resources, recombinant DNA, epidemic - a social problem and its prevention - our role. Also organised were science films, taramandal shows, slide shows, elocution contests, science rally, etc.

Regional Science Centre, **Lucknow** organised a science fair where 9 different scientific organisations had put up pavilions to display their activities and achievements; also 15 local schools set up stall and displayed their science models for 4 days.

Bardhaman Science Centre organised a 'Science March' besides other programmes.

District Science Centre, **Tirunelveli** had a programme packed day with a 'Science March', and C V Raman Memorial Lecture on 'Science and Health' by Prof S Rajan, an eminent scientist.

District Science Centre, **Dharampur** with active support from Gujarat Council of Science and Technology organised science quiz and essay competitions, a 'do-it-yourself' competition for teachers, a popular science lecture, anti-superstition demonstrations and sky observation programmes.



The Computer Fair is gaining fast popularity in the various science centres of NCSM. School children logically think up problems and their solutions. It is hoped that these exercising of the local mode of thinking at an early stage will help these young people to be better, scientifically minded citizens in the future. The three-tier competition can be explained as follows: (a) software development competition where students develop educational software packages which will be used in classroom education; (b) computer quiz; (c) essay writing competition on computer related topics; and (d) extempore speech on computer related topics.

Students who qualify in the district level competitions go on to participate in the state level fair in the respective states and those who qualify in the state level fairs go on to represent their states in the inter-state level fair. All students who participate in the fairs go back home with a satisfaction of having interacted mutually and learnt quite a lot about computers. In addition they also win handsome prizes and scholarships.



Visvesvaraya Industrial & Technological Museum, Bangalore organised the Computer Fair between Nov 16 and 22. The Fair was inaugurated by Dr V Rajaraman, Chairman, Super Computer Education and Research Centre, Indian Inst of Science, Bangalore. Besides the software development competition, a quiz and a sit-and-draw competition for children was also organised.

The Calcutta District Computer Fair was held at Birla Industrial & Technological Museum between Dec 28 and 30.



The district level fairs of West Bengal have already been held in 9 more districts with the active participation of the District Magistrates and District Inspectors of Schools (Secondary) and the whole district administration and all the schools of the respective districts. About 160 students from the districts

participated in the state level fair between Dec 31 and Jan 2 at BITM which was inaugurated by Shri Subhas Chakraborty, Minister for Sports, Tourism and Youth Affairs, Govt of West Bengal. Students who qualified in this round competed with about 170 students from Assam, Bihar, Orissa and the North-Eastern states in the Inter-State Computer Fair at BITM between Jan 4 & 8. This fair was inaugurated by Shri Kanti Biswas, Minister for Primary and Secondary Education, Govt of West Bengal.

Regional Science Centre, Guwahati held the State Computer Fair between Oct 27 and 30 in collaboration with Directorate of Secondary Education, Govt of Assam. There were 50 participants from 11 schools.



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A close interview with Mr T Rex



- Who has been the greatest influence in your life?
A young American Film Director.
- What objects do you always carry?
A high power generator.
- What is your greatest fear?
Power failure.
- What makes you most depressed?
Circuit failure at the time of VIP visit.
- What do you dislike most in yourself?
Working on commands (computer).
- What do you dislike most on your appearance?
Nothing.
- What is your favourite dream?
Escape to the woods of India.
- What is your nightmare?
Acting in Indian Art Film.
- How would you like to be remembered?
As a romantic hero in the history of cinema.
- What brings tears to your eyes?
Pollution of the city.