Capsule 35

OCT-DEC 100

Space Week

Between July 16 and 24, all units of NCSM observed Space Week '94 to commemorate the twenty-fifth year of man's landing on moon. To mark the occasion almost all the centres had organised several programmes, a brief survey of which is presented below.

A commemorative exhibition titled Man on the Moon was



At Man on the Moon exhibition

organised at the Sational Science Centre, Della with the active support of the American Centre, New Delhi. Besides the exhibition, special video programmes, popular talk by the Director of Nehru Planetarium, quiz, sit-and-draw and essay writing contests were organized. About 9000 visitors participated.



had a multitude of programmes. The programmes included Sit & Draw and Poster competition. Elocution contest, Popular Science lectures on the topic Space Communication, Space Remote Sensing by the scientists from Space Application Centre, Ahmedabad and Jupiter Collision by Dr V S Venkatavardhan, Director, Nehru Planetarium. Bombay and special film/slide shows on space related subjects. About 4150 students, teachers and general public participated in the various programmes organised during the Space Week '94 celebrations. Prizes were sponsored by Camlin India Ltd. and L B Publishers & Distributors (P) Ltd.,



A lot of 'Space' to write about

organised Space Week celebrations through open house quiz, creative writing contests, slide demonstrations, astronomy workshop, etc. But the two mainstays were the two exhibition: 25 Years of Man's landing on the Moon, (organised in collaboration with USIS, Calcutta) and another on Jupiter. The moonlanding exhibition was inaugurated

by Mr Dino J Caterini, Director, USIS, Calcutta.

California collaborated with AKAA and KSSP and programmes were organised at the Centre, St. Joseph's Boys' High School and Devagiri College, Calicut, The Space Week was inaugurated by Dr A N P Umerkutty, V.C., University of Calicut, who stressed the need to take science to the door steps of common man, enlightening people about the astronomical concepts, etc. Special and popular lectures were organised too. Prof K Sreedharan of Devagiri College gave a special lecture highlighting various astronomical concepts in a simple way. Retd. Headmaster and an avid amateur astronomer Kunni Krishna Kurup gave a special lecture-cum-slide show on the solar system. Madan Gopal, Project Coordinator of RSC, Calicut gave a popular lecture on Planet Jupiter and the impact of comet Shoemaker Levy - 9. Father Mathew Chalil, Principal, St. Joseph's College, in his speech, highlighted the developments of space technology and its benefits to mankind. K K Kurup's lecture on White Holes was widely acclaimed. On the valedictory day, Dr Achutan, Retd. Dean of Calicut University spoke on importance of satellite communication and new findings in astrophysics by space exploration.

To initiate student participation, there was a painting competition on the *Space* as a theme; a district

SPACE WEEK

level quiz competition on Space Science; an extempore talk on Space Science for high school students. A question forum headed by Prof Sreedharan of Devagiri College answered various questions put forth by the audience on astronomy. Film shows were also held.

Prizes at the various competitions, sponsored by firms in Calicut, were won by students of Govt Ganapath Girls High School, Gwalior Rayons High School, St. Joseph's College, B.E.M. Girls High School and Presentation High School

Educational programmes on space science was the main theme of Regional Science Centre. Gawaluti's Space Week programme. Popular talks were delivered by Dr Kulendu Pathak, Professor, Dept of Physics, Cotton College on Space Around Us and by Dr Hira Lal Duorah, Professor, Dept of Physics, Gauhati University on Our Future in Space. Film and slide shows enlivened the dry facts of space technologies while special space odyssey and Taramandal shows taught visitors what to expect in the blue canopy overhead. Other highlights included demonstration of special science kits and projects on space, an exhibition entitled Entering into Space, quiz and painting competition for school students.

The Space Week celebration was inaugurated by Dr R S Chaturvedi, Director, Remote Sensing Application, Lucknow at Regional Science Control Lucknow A debate was organised on the theme Space Programme is too costly for a developing country like India: School students painted on the theme Imaginary Space Craft coming from other Planet while a science fiction

writing competition was based on Experience in an imaginary colony on moon. There were popular lectures on space, remote sensing application, slide shows, film show on expedition to moon and an open house quiz. The valedictory address was made by Prof Sunii Datta, Head, Dept of Mathematics and Astronomy, Lucknow University, He also gave away the prizes.

Report Seams of the Report of

Regional Science Corlelinguit collaborated with Dept of Physics, S V University, Truputi and National MST Radar Facility, Gadanki, for the Space Week celebration, Prof P B Rao, Director, National MST Radar Facility inaugurated the programme and delivered a popular lecture on Radar Exploration of Space. There were also open house quiz, painting competition and technical conference for junior college students. There were also daily film shows on Space and Tarumandal shows.

Namum held widescale painting and essay competitions for school students as well as an open house quiz. P V Khandekar gave a popular lecture with slide show on The Moon. There were also other space-related slide and film shows. Prizes in various competitions were won by students of St. Joseph's Convent Girls High School, S F S High School, Mahatma Gandhi Continental High School, New Apostolic English High School, Smt C B Adarsha Vidva Mandir, Dinanath High School and S-F S Junior College. The prizes were sponsored by Indo-Plantations and Resort Developers, Nagpur and Poddar.

Shrikeishna Science Centre Patina s popular science lecturer at Space Week was a young VIP -Rituparno Goswamy, Bihar's first national champion in National Science Seminar (1990) and who represented India in International Space Camp at Alabama, USA. He spoke on Collision of the Century, Taramanchal demonstrations and sky observation programmes were also organised.

District Science Centre
Diarrimpur was joined by District
Education Office, District Madhyamik
Vigyan Mandal and Nehru Yuva
Kendra - all from Valsad, to
observe the Space Week. Popular
lectures and workshops were the
mainstay - Prof Anil Goel from
Valsad spoke on Our Universe,
amateur astronomer, Amit Korde
of Bombay spoke on Planet
Jupiter and Crash of Shoemaker
Levy - 9 into Juppiter.

School teachers participated through submission of essays on the topic Spirit of Yesterday Vision of Tomorrow as related to space. Students of 18-25 years attended a seminar on the same topic, followed by students between 12-17 years, Chetan Vashi, Director, Kalvan Computers, Valsad presented videogames on space for children while Fine Arts College, Nargol and Amalsad, presented a poster exhibition on space. R B Suthar, District Youth Coordinator, Nehru Yuva Kendra organised a youth camp on space awareness programme.

Besides, there was a workshop on low cost teaching aids in astronomy, refractor telescope making programme for secondary students, quiz, etc.

Prof Pandya, Principal, B K M Science College, Valsad was the Chief Guest for the inaugural function while District Education Officer, A G Patel gave the valedictory address as well as the

Tirunelvell presented a mix of



innovative and regular programmes for their Space Week celebration. Besides establishing effective ways to bring common people and students in closer liaison with the world of science, this centre has again sprung a few surprises in presenting programmes. The inauguration was made in the presence of Dr R M Vasagam, Dy Director, Vikram Sarabhai Space Centre, Trivandrum as Chief Guest and Dr N Vedachalam.

Director, ISRO-ISU, Trivandrum. There were plenty of seminars on Space to suit every choice. Dr



Grasping the intricacies of the solar system

Vasagam spoke on Emerging Trends in Space Programme; Dr Vedachalam spoke on India's Space Programme: Tenth Planet was the theme of Nellai S Muthu from ISRO who also gave a lecture in the regional language; Dr N Krishnan of M S University, Tirunelveli spoke on Indian Remote Sensing Satellites; Prof L Janakiraman spoke on Importance of Astronomy Education and Astronomy - India's heritage; Dr S Arumugam spoke on Modern Day Astronomy and Curriculum Development while Prof Radhakrishnan spoke on Search for Extra-Terrestrial Intelligence; there was also a popular lecture on Indian Astronomy - a vedic science by Prof L Janakiraman.

Film/video shows organised on the topics - Lift off at Thumba, A Space flight around the Earth, etc.

There were overnight sky observations, planetarium and Taramandal shows; intergeneration quiz; workshop on astronomy education, astronomical instrumentation; as well as the usual rounds of debates, elecution contests, essay writing, question and answer sessions.

Purula, assisted by BITM, Calcutta and NCSM, observed Space Week. The inauguration was done by Dr. Abdul Motin, Professor, Physics Dept, Nistarini College, Purulia. On the valedictory day, Prof Badal Chandra Mishra, Head, Dept of Physics, J K College, Purulia was the Guest-in-Chief while Biswanath Baneriee, former Headmaster, Manbhum Victoria Institution. Purulia, was the Guest-of-Honour. Film shows, quiz, popular lectures other astronomy programmes were the highlights.

On Aug 2, Ramakrishna Mission Vidyapith of Purulia, West Bengal observed the 133rd birth anniversary of Acharya P C Ray. The day was designated as Science Day. Prof Amarnath Sanyal. Head of the Dept, Power Plant Engineering, Jadavpur University was the President on the occasion.

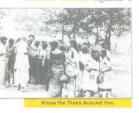
On Aug 8, Anthropological Survey of India and Indian Museum observed the birth centenary of Dr B S Guha, Founder-Director of the Anthropological Survey of India. An exhibition was organised to highlight the occasion. The exhibition was inaugurated by K V Raghunatha Reddy, Governor, West Bengal while Kanti Biswas, Minister, Primary & Secondary Education, W.B. presided.

Deepak P Kulkarni, National English High School, Virar has been selected for ASTC Honour Roll of Teachers 1994 alongwith 55 teachers from USA, Austria, Finland, Mexico and Taiwan. This is given to the teacher who is nominated by the Science Centres/Museums who are the members of Association of Science-Technology Centres International Museum Community all over the world and who has made exemplary use of science centres programmes and resources, in order to significantly improve the quality of science education at their school.

Deepak P Kulkarni was selected for regularly visiting the centre and attending educational extension activities alongwith students. After receiving training at the centre, he has started a Science Club in his school and has developed a number of teaching aids. To some extent he has been able to develope a Mini Science Centre in the school and also has an ambitious plan to collaborate with the centre for a number of educational programmes.

SCIENCE CENTRE NEWS

On the occasion of World Forestry Week (July 14-20), Birla Industrial & Technological Museum, Calcutta organised a



Tree Identification Programme at Rabindra Sarovar (South Calcutta Lake). More than ninety school children from 12 different schools with their guardians and teachers attended. The children were taught many clues to identify a tree, and that basically looking at a leaf one can identify the tree because a leaf is thought to be the face of tree. Experts from NGO's like Prakriti Samsad & Nature Observer helped children to observe and note down the fruit, flower, shape of a tree, bark, branching, leaf and leaf arrangement of each tree in a Tree-Watching Chart supplied to each student from BITM. The programme lasted for three hours. Children were also tested by showing a tree and asking them to tell the name and there were rare mistakes

BITM in collaboration with the conganized a special programme to celebrate birth centenary of naturalist and popular science writer Gopal Chandra Bhattacharya on July 31 in the Museum. While inaugurating the programme Dr T M Das, ex-Professor, Life Science Centre, University of

Calcutta enumerated the contributions of Gopal Chandra Bhattacharya in the field of Natural Science and his style of communication through Bengali language. A short documentary film on his life and works was also settemed.

BITM in collaboration with R K B K Acharya Prafulla Chandra Sammilanee celebrated the birth anniversary of Acharya P C Ray on Aug 2. Prasanta Chatteriee, Mayor. Municipal Corporation the programme and spoke on the life and contributions of the great scientist. Dr Pratap Chandra Chunder, ex-Union Minister for Education spoke on the various fields where the Acharva's contributions are still remembered by the present generation. Dr K P Sen Sharma, ex-Head of the Dept remarked that Acharva was not only a great scientist of yesterday but he was a great thinker and Sushil Kumar patriot. Dr Mukherjee, ex-V.C., University of Calcutta presided over the function.

The Logo course, under Computer Literacy Programme was organized for children from Aug 22 to Sep 3 at BTIM. About 22 students from 17 different schools of Calcutta participated in this programme. Certificates were awarded to all participants and after an assessment, best three students were permitted to join BTTM's Sunday Computer Club.

BITM organized special film consists from the state of the special film of Calcutta and neighbourhood from Aug 4 to 6 in BITM Auditorium. Films on Moon Walk and Voyager were screened to commemorate 25 Years of Man's Landing on the



Astronomy Workshop on Jupiter

Moon. About 1900 students from 16 schools attended the 11 shows.

A Film Festival was organised by Nebru Science Centre, Bourbay between July 5 and Aug 7, 62 schools comprising of 7190 students and 236 teachers participated during the month long festival. Each participant was charged a concessional Rs.2 as an entry fee to the Centre.

Computer Awareness programmes were organised by NSC floshed students between July 19 and 29 and again between Aug 16 and 27 in which 8 and 16 students participated from different schools in each respectively. The students were introduced to Computers & DOS System, few commands in DOS, GWBASIC Commands in details and short explanatory programmes, how to write a good quality programmes and drawing designs with the help of LOGO. In both the programmes, 15 and 20 softwares were developed respectively.

A Teacher's Training Programme was conducted by NSC between Aug 2 and 11. 18 teachers from 13 schools in Bombay participated in the programme. The teachers were trained in design and fabrication of teaching aids. The participants completed 8 projects in different subjects working in 8 groups (64 projects in all). The different programmes such as guided tour

SCIENCE CENTRE NEWS

to the galleries of Nehru Science Centre and exposure to the different activities such as Science Demonstration Lecture etc were conducted for the participants. The participants were also given an exposure to computers in the field of science teaching and guided for organisation of science club in their school.

In collaboration with Indian Express Group and Suman Motels Education Foundation, a Teacher's Day Finale programme was held at NSC on Sep 3. The programme included elocution competiton, quiz contest, essay writing competition, etc. Prizes were also distributed to various winners which included the Best Teacher of the Year award, Best Principal of the Year award and also prizes for the parents participating in the essay competition. The programme was attended by 250 students, teachers and general public.

Trupati completed its First Year on Sep 23. On the First Anniversary Day, a new facility was opened for the children of the State by Prof P Jayarama Reddy, V.C., Sri Venkateswara University, Trupati. The function was presided by Dr K V Naidu, Director of S V Institute of Medical Sciences and deemed Medical University, Trupati,



View of the Children's Science Gallery with children actively operating the exhibits



inauguration of the Children's Science Gallery by the Chief Guest Prof P Jayarama Reddy

The Children's Science Gallery throws open a variety of new participatory exhibits to quench the thirst of the curious minds of the young visitors coming to this Centre. The inaugural function was attended by 215 students. Here a child can play with variety of reflecting surfaces and refracting mediums for investigations to find out the basic principles of reflection, refraction, convergence and divergence of light. The Taramandal accompanying this gallery takes the young minds soaring into the deep space to understand the constellations and universe in general. The astronomy section gives the children an understanding of projective astronomy and how the phases of the moon occur. The Bio-Science corner deals with the human Biorythm, Iris reflex, reaction time, heart beat game, turtle pool, etc. The mechanics section opens up a Pandora's box, where a challenge waits for the child to make a ball resonate to his striking frequency. The puzzle corner developed on 'discovery approach' basis, poses certain problems on skill, logic, observation and mathematics. The child has to solve them using his inherent skills.

Regional Science Centre, Lucknow observed its fifth anniversary celebration between Sep 7 and 9. R A S Tyagi, Chairman, Computer Society of India, Lucknow was the Chief Guest. Popular science lectures were delivered by B K P Saha on Computer Technology and Applications: Looking beyond and by Dr Rakesh, Goel on Computer Communication and Newark Competitions were organised in various fields: a debate on Do small organisations benefit from computer networks, computer software development, etc. The valedictory address was delivered by Ramji Kapoor, GM (System), UP Development & System Corporation.

Between Sep 1 and 15, Dharampur organised a Plant Nursery Development programme in collaboration with Nehru Yuva Kendra, Valsad, Programme highlights included popular lectures/demonstrations on kitchen gardening projects, social forestry programmes, collection of medicinal plants and development of the same in nurseries, grafting techniques for local fruits, indoor/ outdoor nurseries for ornamental plants, etc. There were field visits as well as introductions to schemes of state/central govts for horticulture and nurseries; followed by film/slide shows on nursery development.

On July 11, District Science Centre, Trumelveli observed World Population Day, Nehru Yuva Kendra, Tirunelveli collaborated. The venue was Rajavallipuram village. Dr S Murugan, Asst Professor of STD, and Dr L N Radha, Asst Professor of Gynaecology, both from Tirunelveli Medical Collège, were the guest speakers. A special address was made by R Mathivanan, Youth Coordinator, Nehru Yuva Kendra. There were also film shows, street play, etc.

Between July 25 and 30, DSC, Tirunelveli and Nehru Yuva Kendra

(Continued to page 8)

SCIENCE SEMINAR

This year the science seminar has been based on the theme 'Population': Resource or a Burden?'. The various science centres have already organised different levels of the seminar which is being attended by an increasing number of students. Given below is a round-up of the seminars held so far.

On Aug 12, the Calcutta District science seminar was organised at BITM, Calcutta Thirty-nine school students from 25 schools and and around Calcutta participated.



On Aug 27, in collaboration with Dept of Sports and Youth Services, Govt of West Bengal, the State level science seminar was organised. Kanti Biswas, Minister for Primary and Secondary Education, Govt of West Bengal inaugurated the seminar. Dr Saroj Ghose, Director General, NCSM also spoke on the occasion. The 17 districts were represented by 34 students. Ananya Ghosal of RKSM Sister Nivedita Girls School, Calcutta will represent West Bengal in the National Science Seminar.



A participant deliberating on the topic at BITM

Bombay Regional level science seminar was held on Aug



A graphic explanation of population growth
16 and 17. Eighty five students
represented a large number of
schools from Bombay at NC
llumbay The Greater Bombay
Education Dept was an eager
collaborator in the seminar.

The State level science seminar was held at RSC, Guwuhati on Aug 30, in collaboration with Directorate of Secondary Education, Govt of Assam. The seminar was inaugurated by Dr Anil Kr Goswami, Director of Assam Science, Technology Environment Council and presided over by Dr Pratul Goswami, Director, Institute of Advanced Study in S&T. Dr Gobinda Ch. Deka, former Principal, Cotton College and Chairman, Local Advisory Committee of RSC delivered the valedictory speech and distributed the prizes.

There were 19 participants representing 13 districts of Assam. This year Assam will be represented by Madhusmrita Bordoloi, a class



eight student of Don Bosco High School, Tinsukia.

District level science seminar was organised at IESC, Trupati on Sep 19 with collaboration from Office of District Educational Officer. The Chief Guest was Ch. Pullaiah, Dy Educational Officer, Trupati.

State level science seminar was organised at Set Pana on Aug 31. Dr Ramchandra Purve, Minister, Primary and Secondary Education was the Chief Guest of the valedictory session which was attended by other eminent personalities as well.

District level science seminar was organised at INC. Puralla on Aug 19 and was inaugurated by Md. Nazrul Islam, Dist Inspector of Schools (S.E.), Purulia. S Goswamy, Director, BITM presided over the valedictory function.

In collaboration with Sports and Youth Services Dept, Gowt of West Bengal, the district level science seminar was organised at the control of the seminar was inaugurated by Prof G S Dey, Dean of Sciences, Burdwan University and the valedictory session was graced by Prof Mohit Bhattacharya, V.C., Burdwan University.

Know the last word on Population: A Resource or A Burden

Our next issue will highlight the prize-winning speeches of contestants delivered at the National Science Seminar on October 20, 1994 at National Science Centre, New Delhi.

INTERNATIONAL NEWS

Multi-lateral collaboration

On Sept 15, at a meeting in Beijing Dr Saroj Ghose, Director General, NCSM, India, Mr Zhang Taichang, Director, China Museum of Science & Technology, Beijing and Dr Bernard S Finn, Curator, Smithsonian Institution, Washington D.C. agreed to a multi-lateral collaboration involving all countries of Asia-Pacific region having science museums.



Mr Zhang Taichang, Director, China Museum of Science & Technology demonstrating an interactive exhibit to Dr Bernard S Finn, Curator, Smithsonian Institution, Washington D.C.

The purpose of the collaboration is to put forth a circulating exhibition on Communication reflecting the latest developments in the state-of-the-art. A preparatory meeting is being planned in Beijing with representatives from different Asia-Pacific countries, supported by the Smithsonian Institution, Washington D.C.



China Museum of Science and Technology, Beijing.

Chinese-Indian workshop for development of veignes bits

China Museum of Science & Technology in Beijing and the National Council of Science Museums in India have taken up a joint programme for holding a series of workshops for generating new concepts and developing science kits for improvement of science education in schools. The first workshop in this series was held at Calcutta during January 18-31, 1994. Among the participants from the Chinese side were Prof Zhang Zhishan, Senior Adviser, CMST. Ms Pan Wei, Senior Engineer, CMST, Mr Du Zhaochen. Senior Engineer and Director, Shenyang Teaching Instrument Factory, Shenyang and Mr Huang Timao, Senior Engineer, CMST. From Indian side, nine participants from different units of NCSM attended. Designs for 40 kits were prepared in the workshop.



A demonstration by Ms Pan Wei

The second workshop in this series will be held at Beijing during April 1-12, 1995. Four science museum curators from India will participate in this workshop along with their Chinese counterparts to develop a series of new science kits which may be used in classroom lectures in schools as well as in popular demonstration lectures for adults.

Rajiv Gandhi Szience Centre in Mouritin

National Council of Science Museums, India has been invited to help the Govt of Mauritius in developing an interactive science centre in Port Louis. The architectural plan for the science centre was prepared in NCSM with the help of Kothari & Associates. The plan was seen and appreciated by A Parsuramen, Minister of Science and Education of Mauritius during his recent visit to Calcutta.

On invitation from the Govt of Mauritius, representatives of the architects visited Port Louis during August 14-23, 1994 and presented the plan to the scientists, educators and administrators of Mauritius. NCSM has started designing and developing the exhibits including a new mobile science exhibition bus which will shortly be sent to Mauritius.



(from page 5)



collaborated to hold the programme Tamiraharani Kalai Payanam - 94, The weeklong environmental awareness programme was in the form of a Kala Jatha. The Jatha started at the District Science Centre and ended at Papanasam (the place at which the river Tamirabarani meets the plains and the pollution process actually starts). The main themes conveyed through the Kala Jatha were:

- Prevent human, animal and other waste from being discharged into the river Tamirabarani:
- * Prevent tree cutting in hills and on the banks of the river and plant more trees.

The Jatha was inaugurated by Dr S Selvanathan, Registrar, M S University and was attended by a number of visiting dignitaries. The messages were conveyed in folk art form through dramas, songs, music, etc.



The Jatha covered 2 schools every day and three to four villages on both banks of Tamirabarani river every night. The response was spontaneous and the messages well received. Doubts on various points related to environment were cleared and many cost effective alternatives suggested to avoid polluting practices followed by the villagers in their day to day activities.

The valedictory function was held at V K Puram (Papanasam), the scene of 28 deaths during Nov 1992 floods in Tamirabarani (incidentally the DSC was also submerged in that flood). The valedictory function was presided by M Parvathinathan, Director, VITM and Promode Kant, LF.S., Chief Conservator of Forest (Project Tiger) and many other Forest officials and local dignitaries. Throughout the Jatha - schools, youth clubs and Mahalir Mandrams rendered cooperation and contributed a lot in organising the performance in their schools, colleges and villages.

The function was conducted at 12 schools and 18 villages. It attracted about 20,000 students and 42,000 villagers during the weeklong Jatha.



Between Aug 31 and Sep 2. DSC and Office of the Chief Educational Officer collaborated to observe District Science Fair 1994. The function was inaugurated by N Muruganandam, IAS, Sub-Collector while H Mahadeva Iver. District Educational Officer presided. A Sankaranarawanan, MD, Sri GomathicMill delivered the special address. On the valedictory day, Principal District & Sessions Judge K Nataman delivered the valedictory address while Chief Educational Officer K Neelakantan presided.

