

DST-INSPIRE INTERNSHIP SCIENCE CAMP - 2013



Department of Science & Technology
Govt. of India

In association with



Jagadis Bose National Science Talent Search
Govt. of West Bengal

Science Camp Entitled:

‘কেন বিজ্ঞান?’

May 14 – 18, 2013

At JB Centre of Excellence for Student – Scientists



Jagadis Bose National Science Talent Search,

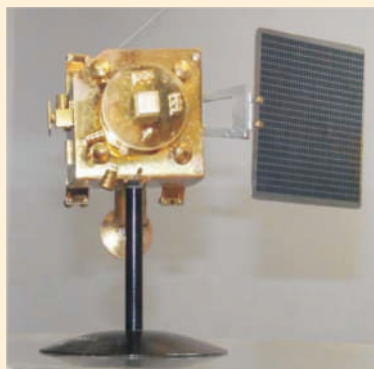
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About JBNSTS

Jagadis Bose National Science Talent Search (JBNSTS), Kolkata was conceptualized in 1958 by visionaries such as Dr. B C Roy, Sir J J Ghandy and others to commemorate the Birth Centenary Celebration of India's first modern scientist, Acharya J C Bose. The program was inaugurated by Pandit Jawaharlal Nehru. JBNSTS is an autonomous institute promoted by the Department of Higher Education, Government of West Bengal. It is administered by a Governing Body with representatives from the State Government, academia and industry. Since 1961, JBNSTS is awarding the prestigious Jagadis Bose Scholarships to selected group of undergraduate students of science, engineering and medicine.



In the last five decades, JBNSTS has grown to become a premiere institute of non-formal science education in the eastern and northeastern States of India with the objective towards pursuit of excellence through motivation, identification and nurture of young talented science students. It helps students to realize the importance of excellence in the scientific world and try to cultivate this in their own lives as students of science. JBNSTS also encourages students towards the learning of basic sciences and inculcates scientific spirit in the minds of young high school and undergraduate students. Focus has been given on unconventional and dynamic methods of non-formal accelerated learning through “out-of-class” activities, which have led to the recognition of intellectually sensitive and inquisitive minds. Since 2004, JBNSTS has launched an innovative middle school science Teachers Training Program which has brought into its ambit motivated teachers from the districts of West Bengal. JBNSTS has developed

science kits and distributed to the teachers for demonstrating scientific principles to the middle school students in the classroom. The financial support for most of the activities of JBNSTS is provided by the Department of Higher Education & Department of Science & Technology, Government of West Bengal. In addition, Council of Scientific & Industrial Research (CSIR), Department of Science & Technology (DST), Government of India & Industries also collaborates with JBNSTS activities.

About DST-INSPIRE Program

Innovation in Science Pursuit for Inspired REsearch (INSPIRE) is an innovative programme being implemented by the Department of Science and Technology (DST), Govt. of India. The basic objective of INSPIRE is to communicate to the youth of the country the excitement of creative pursuit of science, attract talent to the study of science at an early age and thus build the required critical human resource pool for strengthening and expanding the Science & Technology System and Research & Development base. Under the INSPIRE project ‘Scheme for Early Attraction of Talents for Science’ (SEATS) is a program to inspire talented Science students (*top 1% performers in class-X board examination*) into basic science streams.



A striking feature of the programme is that it does not believe in conducting competitive exams for identification of talent at any level. It believes in and relies on the efficacy of the existing educational structure for identification of talent and builds on opportunities that can be derived within the systems.

Science camps are a great way for children to explore the principles and methods of scientific research and strive to get young people interested in science at an early age. They are based on concepts of facilitated self-learning, holistic education, group activities, exchange of cross-cultural ideas, motivation towards independent thought and action and forming life-long friendships with similar minded people and established scientists. Leadership, passion and appreciation of the nature around us are invaluable characteristics for future scientists, and the Science Camp activities strive to encourage these traits.



Organizing Committee

Academic Committee:

Prof. (Dr.) Papiya Nandy, Hony. Director, JBNSTS
Dr. Paromita Roy, Dy. Director, JBNSTS
Dr. Abhijit Kar, Scientific Officer, JBNSTS
Dr. Smarajit Manna, Student Advisor, JBNSTS

Camp Coordinators:

Shri Joydip Das, Asst. Director (Admin), JBNSTS
Shri Dipankar Sarkar, JBNSTS



Mentors

Dr. Papiya Nandy

Professor & Hony. Director, JBNSTS and
UGC Emeritus Fellow, Department of Physics
Jadavpur University, Kolkata

Dr. Soumitra Sengupta

Senior Professor
Department of Theoretical Physics
Indian Association for the Cultivation of Sciences, Kolkata

Dr. Subhrangsu Aditya

School of Bio Science & Engineering
and School of Cognitive Science
Jadavpur University, Kolkata

Dr. Siddhartha Roy

Professor & Director
Indian Institute of Chemical Biology
Jadavpur, Kolkata

Dr. Chaitali Mukhopadhyay

Professor
Department of Chemistry
University of Calcutta, Kolkata

Dr. D. P. Duari

Director, Research & Academics
M. P. Birla Institute of Fundamental Research
M. P Birla Planetarium, Kolkata

Shri Samar Bagchi

Science Communicators' Forum,
Kolkata

Dr. Swagata Das Gupta

Professor
Department of Chemistry
Indian Institute of Technology, Kharagpur,
Midnapore (W)

Mr. Goutam Biswas

Dept. of Computer Science & Engineering,
Indian Institute of Technology, Kharagpur, Midnapore (W)

Dr. Indranath Sengupta

Professor
Dept of Mathematics
Jadavpur University, Kolkata

Dr. Samita Basu

Professor
Chemical Science Division
Saha Institute of Nuclear Physics
Salt Lake, Kolkata

Dr. Smritikumar Sarkar

Professor & Vice Chancellor
Burdwan University, Burdwan

Dr. A. N. Lahiri Majumder

Senior Professor
Plant Molecular & Cellular Genetics
Bose Institute, Kolkata

Dr. Paromita Roy

Deputy Director, JBNSTS

Dr. Abhijit Kar

Scientific Officer, JBNSTS

Dr. Smarajit Manna

Student Advisor, JBNSTS

Ms. Sucharita Kundu

JBNSTS

CAMP RULES

Welcome to the Science Camp ‘কেন বিজ্ঞান?’

Here you will have a unique experience of learning science through active interaction with great scientists and be encouraged to share your ideas with others. No test / grade-only learning science in a different way.

General Instructions:

- The camp hours are from **09:30 a.m. to 5:00 p.m.** You are to attend all the sessions in your school uniform. **MOBILE PHONES MUST BE KEPT IN SWITCHED OFF MODE DURING ALL ACADEMIC SESSIONS.**
- Each participant has to make registration twice daily, once in the morning and other in the afternoon before starting of post lunch session.
- All the participants will be divided into groups. There will be a group leader for each group selected by group members of each group. On **18th May, 2013**, there will be a session for Project Presentation by the participating students. Each group has to prepare a scientific project and will have to present in front of the judges bench during 02:00 p.m. – 05:00 p.m. on that day. Each group will get 10 minutes for presentation and 5 minutes for discussions.
- You will not be given any home work, but you are expected to interact freely with the experts, your group members and other groups.
- SUBMISSION OF ALL DOCUMENTS AND REIMBURSEMENT WILL BE MADE FROM **REGISTRATION DESK ONLY.**

Submission of important documents:

- You are required to submit an attested copy of your 10th Standard Board Examination Mark Sheet, held in 2012 and filled-in STUDENT’S INFORMATION SHEET during the afternoon registration on **14th May, 2013.**
- All students of the Science Camp will receive a Book Grant of Rs. 1,500/-. Book bill(s), authorized by respective Headmaster/ Headmistress, are to be submitted on **16th May, 2013** during afternoon registration (01.00 p.m. – 02.00 p.m.).
- Travel bills (local, as per norms) are to be submitted on **17th May, 2013 during 9.30 a.m. – 10.00 a.m. (during morning registration).**
- You are required to fill up the FEED BACK SHEET and submit it on **18th May, 2013** during afternoon registration.

Reimbursements:

Reimbursement for Travel expenses and Book Grant will be made on **18th May, 2013 during 01.00 p.m. to 02.00 p.m.**

On the last day i.e. **18th May, 2013** you will receive the **Participation Certificate.**

Name of the participating schools:

- Sir Romesh Mitter Girls’ School (H.S.), Kolkata
- Ramakrishna Vivekananda Mission, Kolkata
- Dr. Shyama Prasad Mukherjee Institution, Kolkata
- Bethune Collegiate School, Kolkata
- Shyamnagar Kanti Chandra High School, North 24 Pgs.
- Barisha High School, Kolkata
- Taki House Govt. Spons. Multipurpose Boys’ School, Kolkata
- Muralidhar Girls School, Kolkata
- Naktala High School, Kolkata
- Ballygunge Govt. High School, Kolkata
- Beltala Girls High School, Kolkata



BRIEF INTRODUCTION TO THE EXPERTS**DR. PAPIYA NANDY**

Dr. Papiya Nandy received her Masters degrees in Physics from University of Calcutta and University of California at Santa Barbara and Ph.D. on Liquid Crystals from Kent State University, USA. Her post-doctoral work was in Experimental Biophysics from Max Planck Institute, Gottingen, Germany. Later she was Associate Professor of Physics in University of Ulm, Germany. She joined Physics department in Jadavpur University and besides teaching for more than 35 years in the Science and Engineering faculties, she was and still is in charge of several research projects. Her field of research encompasses membrane biophysics, numerical analysis of DNA and protein sequences and application of Nanomaterials in ceramics and bio systems. She has more than hundred research publications in peer reviewed journals and 3 patent awards. She has guided 12 Ph.D. Thesis and 20 Masters Thesis. She is currently the Emeritus Fellow of Jadavpur University and the Hony. Director of JBNSTS, of which she is a scholar from the first batch in 1960. Here her objective is to make JBNSTS a vibrant and dynamic institute and to motivate, identify and nurture young talented science students and establish the base of scientific enquiry and culture of tomorrow.

DR. SOUMITRA SEN GUPTA

Dr. Soumitra Sengupta is presently a Senior Professor of the Department of Theoretical Physics, Indian Association for the Cultivation of Science, Kolkata. He did his B.Sc. from Presidency College, M.Sc. from Calcutta University and Ph.D. from Saha Institute of Nuclear Physics, Kolkata. His academic career includes several distinguished positions such as Sr. Lecturer in the department of Physics, Presidency College, Sr. Lecturer & Reader in the department of Physics, Jadavpur University, Reader, Professor and Sr. Professor, Department of Theoretical Physics, IACS. He is a fellow of The National Academy of Sciences, India. His Current Research Interest includes String Theory, Supersymmetry, Supergravity, Braneworld Phenomenology, Cosmology and Black holes.

DR. SUBHRANGSU ADITYA

Subhrangsu Aditya, M.B.B.S. from NRS Medical College (2000), senior JBNSTS scholar (1995) is currently pursuing his research at School of Bio Science & Engineering, Jadavpur University. Besides, He is a guest faculty for the M. Phil. Course in Cognitive Science in the School of Cognitive Science, Jadavpur University. He is also a guest faculty for the Advanced Diploma Course in Stress Management in the Center for Counselling Services and Studies in Self-Development, Jadavpur University (CCSSS-JU). He is an associate member of SAMIKSHANI Centre for Psychoanalytical Studies and Mental Therapy. He has publications in various international journals (such as *International Journal of Artificial Intelligence and Soft Computing*, 2012; *International Journal of Computational Vision and Robotics*, 2009) and conference proceedings (such as *2010 IEEE Students' Technology Symposium*; *International Joint Conference on Artificial Intelligence: IJCAI-2007*; *International Workshop on Spatial Issues in Language and Vision: SLIV-2005*); authored a *bilingual book* entitled "*Ragaragir paristhiti kibhabe samlano jay*" ("*Managing anger provoking situations*") published from Jadavpur University Press (JUP), 2012 and book chapters (such as "Ethical Issues in Mental Health Services from Consumers' Perspective" published in the book *Ethical Issues in Mental Health Services*, 2009; "Determinants of Perception: A Neurophysiological Perspective" published in the book *Determinants of Perception*, 2009). He participated as a resource person in the UGC Sponsored Refresher Course "*Art and Science of Mechatronics and its Application in Robotics*" held at Electrical Engineering Department, Jadavpur University. He was invited to present a paper entitled "Protecting Children in Cyberspace" at the *Institute of Engineers (India)*, West Bengal State Centre, on the *World Telecommunication and Information Society Day*, May 17, 2009 and a talk on "*Brain Mapping and Brain Computer Interfacing (BCI)*" in the "*Faculty Development Programme under TEQUIP-II*" at College of Engineering and Management, Kolaghat, January 18, 2013. His current areas of interest are Cognitive Neuroscience, Biosignal Processing, Artificial Intelligence, Psychological Counselling, Stress Management, Cyber-relationship etc.

DR. SIDDHARTHA ROY

Dr. Siddhartha Roy is currently the Director of Indian Institute of Chemical Biology (IICB-CSIR) Kolkata. After completing his Bachelors from Presidency College in Chemistry he did his Ph.D. in Biochemistry from University of Delaware, Newark, Delaware, USA. Later he did his post doctoral research in many distinguished places across the world such as Brandeis University, Waltham, Massachusetts, USA, National Institutes of Health, Bethesda, Maryland, USA and Bose Institute Kolkata, India. Formerly he was holding a Departmental Chair Professorship at Bose Institute, Kolkata. He is recipient of several prestigious awards and fellowships, which includes Shanti Swarup Bhatnagar Award and J.C. Bose Fellowship (Department of Science and Technology). He is also Fellow of Indian National Science Academy (F.N.A.), Fellow of Indian Academy of Sciences (F. A. Sc.), President, West Bengal Academy of Science and Technology. His current research interest is Drug design, Protein-nucleic acid interaction, Protein and peptide Engineering. He has published more than 100 articles in different international journals, written book chapters and guided several Ph.D. students.

DR. CHAITALI MUKHOPADHYAY

Dr. Chaitali Mukhopadhyay is presently a Professor, Department of Chemistry, Calcutta University. She did her B.Sc. with Chemistry honours from Presidency College in 1982, M.Sc. in Chemistry from Calcutta University in 1984 and Ph.D. from Molecular Biophysics Unit, Indian Institute of Science, Bangalore in 1990. Her areas of specialization include chemical and biochemical recognition, structure and dynamics of macromolecules, high resolution and two-dimensional NMR spectroscopy and other spectroscopic measurements on interacting systems, molecular modeling, and molecular dynamics simulation of large systems. Dr. Mukhopadhyay visited Department of Chemistry & Biochemistry, University of Maryland, Baltimore County, Maryland, USA as a Visiting Scientist during April - June 2005.

DR. DEBIPRASAD DUARI

Dr. D P Duari is presently the Director, Research & Academic of M. P. Birla Institute of Fundamental Research, M. P. Birla Planetarium, Kolkata and Honorary Faculty, Physics Department, Presidency University. He did his B.Sc. & M.Sc. in Physics from Jadavpur University and Ph.D. from Inter University Centre for Astronomy & Astrophysics, Pune. He was a Post Doctoral Fellow of Tata Institute of Fundamental Research. He was associated with a number of distinguished academic institutions including Institute for Advanced Studies, Iran, University of Cambridge, U. K., and Manchester Institute of Science & Technology, U. K. He is a fellow of Royal Astronomical Society and a member of International Astronomical Union.

SHRI SAMAR BAGCHI

Shri Bagchi is the former Director of National Council of Science Museums of India and other 5 science museums in eastern India were also under his jurisdiction. He is connected with lot of science popularization & educational institution as effective board member. He has organized the popular science quiz program “Quest” in Doordarshan from 1983 – 88. He has got National Award for his contribution in Science Popularization through Mass Medium in 1992. He is the member of executive community and National Council for Science and Technology Communication, Department of Science & Technology, New Delhi. He is also an Environmental & Social activist in West Bengal.

DR. SWAGATA DAS GUPTA

Dr. Swagata Dasgupta is currently Professor, Department of Chemistry, IIT, Kharagpur. She did her M.Sc. from IIT, Kanpur in 1987 and Ph.D. from Rensselaer Polytechnic Institute, USA in 1994. Her research area includes Protein Chemistry, Protein ligand binding, Protein Structure Analysis. She has published more than 75 scientific papers in national and international journals. Under her guidance, 9 students have already obtained their Ph.D. degree and 12 students are working for the same. She is an Elected Member, National Academy of Sciences, Allahabad and an editorial board member of Protein and Peptide Letters.

SHRI GOUTAM BISWAS

Shri Biswas is associated with Department of Computer Science and Engineering, Indian Institute of Technology, Kharagpur. He has conducted several seminars on the topic “Mathematics Beyond Curriculum” with his own effort in different schools of West Bengal. He is known by his students as an inspirational and excellent teacher.

DR. INDRANATH SENGUPTA

Dr. Sengupta is a professor of Mathematics in Jadavpur University and associated with Ramakrishna Mission Vivekananda University, Belur. He has completed his B.Sc. & M.Sc. from Jadavpur University and received his Ph. D. degree from Indian Institute of Science, Bangalore in the year 2001. Dr. Sengupta is a recipient of the BOYSCAST post doctoral fellowship of the DST, Government of India and research fellowship of the University of Valladolid, Spain. He was a Post-doctoral Fellow at University of Utah, USA and visiting faculty at University of Missouri, Columbia, USA. His research interests lies on Algebra (Commutative Algebra) & Geometry.

DR. SAMITA BASU

Dr. Samita Basu is Professor at Chemical Sciences Division, Saha Institute of Nuclear Physics, Kolkata. She did her Ph. D. from Indian Association for the Cultivation of Science. Her Research Interests are Photochemistry in homogeneous (solvent) and heterogeneous (micelles, reverse micelles, vesicles) media, mainly on Electron Transfer & Hydrogen abstraction and Interaction between small drug-like molecules with protein and DNA using several spectroscopic techniques.

DR. SMRITIKUMAR SARKAR

Dr. Smritikumar Sarkar is presently the Hon'ble Vice-Chancellor, University of Burdwan. He did M.A in 1973 and Ph. D. in 1992 from Calcutta University. During his academic career, he was the recipient of several scholarships i.e. National Loan Scholarship, DPI Merit Scholarship, UGC Junior Research Fellowship and UGC Teacher Fellowship. His present research interest lies on Social & Economic History of Modern India, Indian Artisans, Blacksmith Tribes, Traditional Technology and Rural Economy & Society. He has supervised several major research project funded by different funding authority, Govt. of India. Dr. Sarkar has acted as a resource person in some prestigious universities and institutes in India and abroad. He has published nos. of research papers in national and international journals. He is also a Freelance Writer in all leading Newspapers published from Kolkata such as The Statesman, Anandabazar, Bartaman, Dainik Statesman etc.

DR. A. N. LAHIRI MAJUMDER

Dr. A. N. Lahiri Majumder is a Senior Professor, Division of Plant Molecular & Cellular Genetics at Bose Institute, Kolkata. He has received his Ph.D. in Botany and D.Sc. in Biochemistry. His present research interest lies on:

- Molecular mechanism of stress-tolerance in plants; Comparative genomic & proteomic approaches towards bioprospecting for stress-tolerant genes and their regulatory elements from wild sources.
- Metabolic engineering of inositol/pinitol biosynthesis for raising transgenic stress-tolerant crop plants
- Phylogenetic studies on inositol synthase: A genomic and proteomic approach.
- Probing of active-site of eukaryotic inositol synthase : Biochemical & molecular studies.

He has received several awards such as SB Saksena Medal Award from Indian National Science Academy, Parija Memorial Lecture Award, Sadakharaswamy Endowment Award, SBC(I) & Career Development Award, UGC etc. He is currently Life member of the Society of Biological Chemists, India, Indian Society of Cell Biology, Association of DNA Technologies, Society for Plant Biochemistry and Biotechnology, International Society for Plant Molecular Biology, USA & American Society for Plant Biology, USA.

DR. PAROMITA ROY

Dr. Paromita Roy did her Bachelors in Psychology (with special paper in family counseling), as well as in Masters in Industrial Psychology and Organizational Behavior from Delhi University. She received her PhD from Delhi University in Clinical Psychology and worked in the field of cognitive deficits in schizophrenia from Delhi University. Dr. Roy has extensive field experience in the area of clinical psychology. Her expertise is in educational psychology, soft skill training, human resource development, curriculum planning, strategy development, pedagogy, teacher training and student counseling. She has been with JBNSTS since 1993. Her focus is on educational paradigms with a socio-holistic view. With her long experience with creative science students and teachers, she has been instrumental in designing tailor made science enrichment programs.

DR. ABHIJIT KAR

Dr. Abhijit Kar received his PhD (Science-Chemistry & Material Science) from Jadavpur University. Dr. Kar carried out his post doctoral research in different parts of the world e.g., South Korea, Switzerland etc. He has also worked as visiting scientist at Ruhr Universität, Germany. His current research interest includes application of nanotechnology for micro-electronics, thin film and nanomultilayer structure for advanced materials. He has expertise on different materials characterization using electron microscopic techniques and simulating materials property. He has published 33 research papers in SCI Journals and authoring book chapter on Transmission Electron Microscopy. He serves as reviewer of many International Peer Reviewed Journals and Editorial Board Member of Journals from Science Publishing group. He is recipient of National Scholarship, CSIR SRF, Scientist Fellow-CSIR etc. He has been honored as most distinguished person by Marquis Who's Who in the world, USA-2008. He is currently working as Scientific Officer of JBNSTS and looking after different academic and research activities and laboratory set up of JBNSTS.

DR. SMARAJIT MANNA

Dr. Smarajit Manna is currently the Student advisor, JBNSTS. He got his Ph. D degree from Jadavpur University. His area of research interest is biophysics more precisely the dynamics of cell membranes including ion channels. He has six research publications in international journals. He loves to pursue research as well as to interact with the students.

MS. SUCHARITA KUNDU

Ms. Sucharita Kundu is associated with JBNSTS for the last 6 years. She did her Bachelors with honours in Botany from the University of Calcutta and Masters in Marine Science from the Department of Marine Science, University of Calcutta. Her area of interest is monitoring the aquatic health of Indian Sundarbans, establishing variations in phytopigments as a strong pollution indicator of urban set up. She delivers popular science lectures in All India Radio and acts as faculty in various students' and teachers' training programs.

Day to Day Program

Day 1 : Tuesday, May 14, 2013

09:30 a.m. – 10:30 a.m.	Registration
10:30 a.m. – 11:30 a.m.	Welcome Address by the Director, JBNSTS and Orientation
11:30 a.m. – 01:00 p.m.	“ঐশ্বর্য কণার আশ্চর্য্য গল্প” Dr. Soumitra Sengupta , Professor, Deptt. of Theoretical Physics, Indian Association for the Cultivation of Sciences, Kolkata.
01:00 p.m. – 02:00 p.m.	Lunch & Interaction
02:00 p.m. – 04:00 p.m.	“How to choose your career?” Dr. Subhrangsu Aditya , School of Bio Science & Engineering and School of Cognitive Science, Jadavpur University, Kolkata
04:00 p.m. – 05:00 p.m.	Interactive Session Dr. Siddhartha Roy , Professor & Director Indian Institute of Chemical Biology, Kolkata

Day 2 : Wednesday, May 15, 2013

09:30 a.m. – 10:00 a.m.	Registration
10:00 a.m. – 11:30 a.m.	“Molecular Modeling” Dr. Chaitali Mukhopadhyay , Professor Department of Chemistry, University of Calcutta
11:30 a.m. – 01:00 p.m.	“Challenges in Modern Astronomy” Dr. D. P. Duari , Director, Research & Academics M.P Birla Inst. of Fundamental Research, Kolkata
01:00 p.m. – 02:00 p.m.	Lunch & Interaction
02:00 p.m. – 05:00 p.m.	“Demonstration of Science Experiment” Shri Samar Bagchi , Science Communicators’ Forum, Kolkata

Day 3 : Thursday, May 16, 2013

09:30 a.m. – 10:00 a.m.	Registration
10:00 a.m. – 11:30 a.m.	“Molecules of Life: Proteins” Dr. Swagata Das Gupta , Professor Department of Chemistry, IIT, Kharagpur, Midnapore (W)
11:30 a.m. – 01:00 p.m.	“First Step to Number Theory” Mr. Goutam Biswas , Dept. of Computer Science & Engg., IIT, Kharagpur, Midnapore (W)
01:00 p.m. – 02:00 p.m.	Lunch & Interaction
02:00 p.m. – 05:00 p.m.	“Spectroscopy, Microscopy, Properties of Fundamental Elements” – Hands on activity at JBNSTS Laboratory - Dr. Abhijit Kar , Scientific Officer, JBNSTS, Dr. Smarajit Manna , Student Advisor, JBNSTS & Ms. Sucharita Kundu , JBNSTS

Day 4 : Friday, May 17, 2013

09:30 a.m. – 10:00 a.m.	Registration
10:00 a.m. – 11:30 a.m.	“The two square theorem” Dr. Indranath Sengupta , Professor Dept. of Mathematics, Jadavpur University, Kolkata
11:30 a.m. – 01:00 p.m.	“Laser and its application in Chemistry” Dr. Samita Basu , Professor Chemical Science Division, Saha Institute of Nuclear Physics, Kolkata
01:00 p.m. – 02:00 p.m.	Lunch & Interaction
02:00 p.m. – 05:00 p.m.	“Spectroscopy, Microscopy, Properties of Fundamental Elements” – Hands on activity at JBNSTS Laboratory - Dr. Abhijit Kar , Scientific Officer, JBNSTS, Dr. Smarajit Manna , Student Advisor, JBNSTS & Ms. Sucharita Kundu , JBNSTS
03:00 p.m. – 05:00 p.m.	“Parents’ Counseling” Dr. Paromita Roy , Deputy Director, JBNSTS

Day 5 : Saturday, May 18, 2013

09:30 a.m. – 10:00 a.m.	Registration
10:00 a.m. – 11:30 a.m.	“Indian Civilization and Science: An Interactive Dialogue” Dr. Smritikumar Sarkar , Professor & Vice Chancellor Burdwan University, Burdwan
11:30 a.m. – 01:00 p.m.	“Is Biology an exciting field for study?” Dr. A.N. Lahiri Majumder , Senior Professor Plant Molecular & Cellular Genetics, Bose Institute, Kolkata
01:00 p.m. – 02:00 p.m.	Lunch & Interaction
02:00 p.m. – 05:00 p.m.	Project Presentation