

RESEARCH SCIENCE INITIATIVE – CHENNAI SUMMER PROGRAMME, MAY-JUNE 2013

Much concern has been voiced of late about the state of science education in India. An important aspect of the larger problems and issues involved here is the need to clearly identify, suitably encourage and carefully nurture the bright children of today, in order to ensure that the country takes its rightful place at the forefront of the knowledge-based society of the future. As we are indisputably in the age of Science and Technology, it is essential to ensure that adequate numbers of the best and brightest are attracted to these areas at an early stage.

The **Research Science Initiative–Chennai** is a new endeavour that seeks to fulfill, in a modest yet serious way, some of these needs. It is associated with, and modelled on, an on-going programme in the USA, the Research Science Institute, that is sponsored by the Center for Excellence in Education based in McLean, Virginia, USA and run in collaboration with the Massachusetts Institute of Technology. This is an annual programme in which about 80 selected students who have just graduated from high school spend 6 weeks in an intensive research programme under the guidance of mentors who are established scientists. The participants are required to submit a project report at the conclusion of the programme. The programme is fully residential, and is multi-faceted, including lectures on the sciences and other subjects as well as some extra-curricular activities over and above the project undertaken by each student.

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The Summer Programme of Research Science Initiative–Chennai is envisaged along similar lines, but with some significant differences, owing to the different circumstances prevailing here. The programme is being organized under the auspices of the PSBB Group of Schools, with Dr. (Mrs.) Y. G. Parthasarathy, Dean & Director, PSBB Schools, as the Chief Patron. Along with her Prof.M.S.Ananth, former Director IIT Madras & Prof. Bhaskar Ramamurthy, Director IIT, Madras are also Chief Patrons who are lending valuable support to this programme. The summer camp is run in collaboration with the Indian Institute of Technology Madras, Sastra University, Thanjavur, Chennai Mathematical Institute and IMSc, Chennai. Other Patrons of RSI–Chennai are: Prof. C. S. Seshadri, Former Director, Chennai Mathematical Institute, Prof. R. Sethuraman, Vice-Chancellor, Sastra University, Prof. M. S. Swaminathan, Chairman, MSSRF, Mr.K.V.Rangaswamy (L&T), Mr. Gopal Srinivasan (TVS-Electronics), Mr.B.Santhanam (Saint Gobain Glass Ltd) and Mr. R. Seshasayee (Ashok Leyland). The Summer Programme will be conducted by the academicians from IIT Madras (IITM), The Institute of Mathematical Sciences (IMSc), Chennai Mathematical Institute (CMI), Anna University, Sastra University and senior administrators from PSBB SSS.

The Summer Programme in 2013 (SP2013) is aimed at exceptionally bright students who have completed Std. XI and are about to enter Std. XII. It is planned to select about 30-35 students for a fully-residential, intensive, five week-long programme to be housed at IIT Madras during the period May - June 2013. The students will be selected

on the basis of their personal statements of purpose, curriculum vitae, academic performance and potential, letters of recommendation from their teachers, and an interview. For the present, practical considerations necessitate restricting the programme to schools (catering to all Boards) in Chennai. The selected students will be provided free lodging and boarding for the programme, as well as a stipend. There are no marks or credits for participation in the programme, nor is the programme intended to be any sort of tuition course for any examination or entrance test. The aim is to channelise the interest, energy and enthusiasm of bright children in an appropriate direction with the help and guidance of experts, active in the subjects concerned. Each selected student is expected to participate in SP2013 in its entirety.

The focus of SP2013 will be on the basic sciences, namely, Mathematics, Physics, Chemistry and Biology, as well as other interface areas and interdisciplinary areas based on, or bridging, these subjects. The programme is meant to impress on young minds the essential unity of science and the close links and inter-relationships between its different parts, and will comprise:

- a) A set of sequenced lectures on selected topics in each subject by experts.
- b) Visits to laboratories and institutions of special interest.
- c) Special lectures by distinguished scientists.
- d) Entertaining/Educative Cultural programmes in the evenings.

A significant component of SP2013 will be a project to be undertaken by each student. Each student will be assigned a mentor for his or her project work. A project report written by the student will be submitted towards the end of the programme, and each student will make a short presentation based on his or her work.

It is envisaged that individual attention will be paid to the students, and close academic interaction between the students and faculty will be achieved. Above all, the aim of SP2013 will be to impress upon students the fact that scientific discovery is an on-going, ever-expanding and exciting enterprise in which they, too, can take part meaningfully.

Application for selection to the programme is to be filled out by the student. Each application must be endorsed by, and forwarded through, the Principal of the school concerned, and must be supported by three letters of recommendation from the teachers of the applicant, one from the class teacher and two from the science/math teachers. **Applicants should be present class XI students only.**

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APPLICATION FORM

To the student applicant: Please type or write neatly and legibly, *in the space provided below each header.* This form must be submitted through the Principal of your school. It must be accompanied by *three* Recommendation Letters from your teachers, including (i) your Class Teacher (ii) your Mathematics Teacher and/or your Science Teacher.

Name and address of your school:

School telephone no.

School E-mail ID

Name in full (write your first name and last name, or write your initials followed by your name, in capital letters. For example, C.V. RAMAN or RABINDRANATH TAGORE :)

Date of birth :

Parent/guardian's name :

Home address :

Phone number(s) :

Res. Landline :

Mobile :
Father/Mother/Student
E-mail Id :

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Subject of interest : Select the subject of greatest interest to you, scoring out the rest.
MATHEMATICS / PHYSICS /CHEMISTRY/BIOLOGY

Explain, in a few lines, the reason(s) for your choice above:

Your marks or grades in Std. X in Mathematics and Science (an attested copy of the mark-sheet or grade card must be submitted with your application) :

Standard XI group: What is the group you have chosen in Std. XI?

Core and optional subjects of study in Std. XI:

Outstanding Awards, scholarships, prizes (including NTSE, KVPY, Olympiads at the state, national or international levels, etc obtained during the last 3 years only)

School level:

City level:

State level:

National:

International:

Community service and social work (brief description):

Extra-curricular activities (list and describe these in brief):

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Short essay: In the rest of this page, write a short essay in your own words on why science interests you, what you have done so far as a result of this interest, and what your goals are. The essay should be a personal statement. Below the essay, sign your name and write down the date.

Endorsement by the School Principal (signature and seal requested):