

To

16th November 2018

The Principal

Chennai

Dear Sir/Madam,

Sub: Research Science Initiative (RSI), Chennai  
Summer Programme 2019 (SP 2019)

We would like to thank you and all other Principals for the excellent co-operation extended to us for making the RSIC Summer Programme-2018 a grand success. We received overwhelming response from schools and excellent feedback from students who attended the last summer programme. They were immensely benefited by the interaction they had with the experienced professors of IITM and other prestigious institutions.

The RSIC Summer Programme has been running in its present form since 2010. Over the past nine years, the programme has grown from strength to strength, and it has helped to initiate, encourage and nurture interest in science and scientific method in a large body of alumni. It is gratifying to note about 300 students of different schools have participated in the RSIC summer programme since 2010 and many of them subsequently opted for programs in pure Sciences and Research. Out of the thirty one students of the 2016 batch, nine of them have taken up courses in pure sciences and have joined IISERs, CMI and other leading universities. Six more of them are into medicine and the rest mainly into engineering. We believe that RSIC programme has certainly helped them to channelize their interests in the right direction and to make informed choices of their academic pursuits.

We are happy to inform you that we have already started planning the RSIC Summer Programme 2019. This being the decennial year, we hope to make the programme very special and memorable to the participating students.

We are enclosing a copy of the Application Form to be filled by the student applicant. We are also sending herewith guidelines to the teachers who will be giving the recommendation letters to the students.

We wish to highlight the following points in this regard.

1. Application Forms duly filled in must reach us by the **7<sup>th</sup> of December 2018**.
2. A school can send a maximum of 7 (seven) applications.
3. Application Forms along with 3 (three) **recommendation letters** from teachers should be attested by the Principal and sent to the following address:

**The Dean & Director,  
PSBB Group of Schools,  
15, Lake First Main Road,  
Nungambakkam,  
CHENNAI- 600 034**

4. Application Forms and other details may also be downloaded from our website:  
[www.psbbschools.ac.in](http://www.psbbschools.ac.in)

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In this connection we would like to inform you that the selection procedure and criteria will be along the same lines as last year.

**Selection is based on the following groups of inputs.**

- a. (i) Academic performance
- (ii) Achievements in competitive examinations like NTSE, KVPY, National Olympiads etc.
- (iii) Participation and achievements in national and international competitions.
- (iv) Participation in extracurricular and community service activities

*Achievements in various examinations & competitions and participation in extra-curricular/community services which will be mentioned in the application form must be verified by the School Principals. Copy of these certificates need not be attached to the application form. They can be produced at the time of interview.*

- b. A short essay on why science interests the applicant- The ideas expressed should be the student's own, and expressed in his/her own words. The essay shall not exceed two handwritten pages.

c. **Recommendation letters from teachers-**

*A lot of importance is attached to these letters and hence they should reflect objectively the strengths and weakness of the students, their aptitude and attitude towards studies with particular reference to the science subjects. Their area of special interests and interesting projects done, if any, may also be mentioned. Please note that routine certification of the conduct of the student will not be considered as valid recommendation. Please also avoid few line letters such as "the student is sincere, motivated and highly performing student...." but take the time to explain what observations and activities of the student make you think so. Marks/grades scored in examinations may not be used as the sole criterion for the students you recommend for the programme. They will be credited for their academic performance through group 'a' as above. In summary, we would like to know from you the qualities and proven aptitudes of students.*

- d. The shortlisted candidates will be interviewed by a panel of experts and the final selection will be based on the results of the interaction.

More information regarding the programme is enclosed herewith for your reference.

If you need any other clarification, please contact Mrs. Vijayalakshmi Srivatsan, at 9840025670

Looking forward to your school's participation in the programme, and with best wishes,

Yours sincerely,

Dr.(Mrs)Y.G.Parthasarathy  
Dean & Director,  
PSBB Group of Schools  
& Chief Patron, RSI –Chennai

Mrs.Vijayalakshmi Srivatsan  
Mentor(Academics)PSBB Schools  
& Chief Co-ordinator, RSI-Chennai

## RESEARCH SCIENCE INITIATIVE – CHENNAI SUMMER PROGRAMME, MAY-JUNE 2019

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 endeavor that seeks to fulfill, in a modest yet serious way, some of these needs. It is associated with, and modeled 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.

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 and 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 2019 (SP2019) 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, six week-long programme to be housed at IIT Madras during the period May - June 2019. The programme is likely to start during the last week of April and conclude by the first week of June 2019. 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 students in an appropriate direction with the help and guidance of experts, active in the subjects concerned. Each selected student is expected to participate in SP 2019 **in its entirety**.

The focus of SP 2019 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 programme (extramurals) in the evenings.
- e) Physical training classes in the mornings

A significant component of SP 2019 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 SP2019 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 letter of recommendation from the teachers of the applicant, one from the class teacher and two from the science/math teachers. **Applicants should only be from the current class XI Science stream**).

**RESEARCH SCIENCE INITIATIVE – CHENNAI  
SUMMER PROGRAMME 2019**

**Application Form**

Please read the instructions/questions carefully before you write your response neatly and legibly in the space provided. This form must be submitted through the Principal of your school. It must be accompanied by 3 letters of recommendation from your teachers, including your Class Teacher and your Mathematics and / or Science Teacher.

1. Your name in capital letters:

2. School name & address:

3. School Phone no.:

4. School email ID:

5. Your date of birth (DD/MM/YYYY):

6. Gender:

7. Parent/Guardian's name:

8. Home address:

9. Home landline no.:

10. Father/Mother's mobile no.:

11. Father/Mother's email ID:

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12. Your mobile no;:

13. Your email ID:

14. Your marks or grades in Std. X Mathematics & Science (an attested copy of the mark sheet or grade card must be attached to your application ).

Mathematics:

Science:

15. Group you have opted for in Std. XI:

16. What are your core and optional subjects of study in Std. XI?

**Academic proficiency** (Do *not* attach any certificates)

17. Did you attempt the NTSE at any stage? What was the result?
  
18. Did you attempt to qualify in the KVPY at any stage? What was the result?
  
19. Have you qualified for the DST INSPIRE Scholarship? If so, in which year?
  
20. Have you participated in any officially recognized / organized Olympiad at any level?  
What was the result? (Do *not* list olympiads run by private / commercial organisations.)
  
21. List any *academic* awards, scholarships and prizes you have received in the last 3 years.



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**General** (Keep your answers brief and to-the-point.)

25. In your opinion, what is the *primary* motivating factor that drives fundamental research in the basic sciences and mathematics?

26. Should a developing country like India spend any of its precious resources on the fundamental research in the basic sciences, or should it focus fully on technological development?

27. Should India spend public funds on advanced technology like space technology and atomic energy, or concentrate entire on ensuring and providing basic amenities like water, food, housing, etc. for all its citizens?

28. In your opinion, are mathematical results (e.g. the Pythagoras Theorem) discoveries, or are they inventions? In other words, do you think mathematics is inherent in nature, or is it purely a construct of the human mind?

29. Place the following subjects in your current order of preference / interest / liking (number them from 1 to 4 in the brackets).

( ) Biology      ( ) Chemistry      ( ) Mathematics      ( ) Physics

State, in brief, the reason(s) for your first preference.

30. As of now, what are your career ambitions and goals? (These may change, of course, as you acquire further knowledge in the coming years.)

31. Explain in brief why science interests you, and what you have done so far as a result of this interest.

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**Endorsement by the School Principal** (Signature with seal)