

DEPARTMENT OF BIOTECHNOLOGY

Ministry of Science & Technology, Govt. of India

STAR STATUS SCHEME



SRI VENKATESWARA COLLEGE

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VII: Outreach programs

Popularizing Science in School children.

As Educators, we often notice and realise that at all levels of formal education, many students are not influenced or impressed with academics in general and particularly with science and maths, as much as we would like them to be. School education is often perceived as a complex composition of theories which are not only tedious but burdensome as well. In our classrooms and laboratories, for popularisation, it is imperative that we create more meaningful exercises which would excite them not just to enjoy learning, but do so without any trepidation. For this, we could simply use observed natural phenomena as a way to explore and understand the universal concepts of both natural and social science. Also, every day events may be used as a way of bringing these sciences to life. Showing students how academic concepts connect to things that they are passionate about allows them to gain confidence and develop enthusiasm for the subject. It also challenges them to move beyond the traditional expectations of classwork and to become more open-minded and help them think creatively.

It is the need of the hour to create awareness among school children as their young minds are highly receptive. School children, particularly in the secondary and senior secondary stages are the best targets for sensitization programs as their mind is highly amenable and open. Once scientific and academic consciousness is created in their minds, half the battle is won as they would grow into sensitive adults who would be more responsible and empathetic towards the societal needs.

It is a well-known fact that understanding and empathy towards knowledge is the answer to almost everything in the universe. Curiosity is the key for learning and practicing any natural, applied, computational or social science. Young children are natural learners: they ask questions, pick-up sticks and bugs outside, and are curious about the world around them. However, school textbooks have many theories, which are difficult for some students to understand. Judging from the physiological experience, it is uninspiring and unstimulating for a student to study many topics and difficult to know its value without interest.

The primary aim of our outreach events are to bridge a longstanding divide between academics and research/ technology. While both forms share organizational approaches in practice, they have remained distinct in career choices. The current education system supports 'rote' learning and restricts freedom at early education stages which leaves less scope for innovation due to lack of creativity. Thus, our event formats are designed to engage the students of secondary, higher secondary levels to develop a vision through experimental learning activities for applying academic concepts to research and technology.

Moreover, the involvement of different streams where prime focus was on experiential learning through hands-on approaches in the fields of both natural, applied, computational and social sciences allow the students to develop an awareness of the interdependence among the disciplines. These interdisciplinary events would allow the students to focus on higher-level learning/ thinking, critical analysis and decision making, which further would encourage students to set their future goals. Also, seeing immediate application of their learning in day-to-day life would motivate the students and facilitate their connection with the environment and the society. The experiments and lectures would provide them greater control of their

reasoning-learning, hands-on, analysis skill set. This teaching approach integrates the academic objectives and methods/experiments/ research from more than one discipline and enables the students to develop an interdisciplinary aptitude.

The funding provided by the star college grant enabled us to organize multiple events under the college banner of '*Sri-Vidya*' that enabled interaction between both our staff and students with students from schools not only in Delhi NCR but also beyond. Some of the flagship events was the adoption of a school in Bhigan, Sonipat, Harayana , the '*Green school initiative*' and '*Mindspar-an Ideathon event*'. All these initiatives we have continued even after the funding from DBT has ended.

List of Outreach Programmes undertaken:

1.	Workshop organized for students of Senior Secondary School Students from Govt. Senior Secondary School (GSSS), Bhigan, Sonapat	Biochemistry, Biotechnology, Botany, Zoology, Chemistry, Physics	150	29 th May, 2015
2.	“SRI VIDYA” - Open House for Senior Secondary School Students from Govt. Senior Secondary School (GSSS), Khanpur, Kalan, Sonapat	Biochemistry, Biotechnology, Botany, Zoology, Chemistry, Physics	120	17 th Sept, 2016
3.	Green School Initiative	Botany, Zoology,	4000 school students from 13 schools <ol style="list-style-type: none"> 1. Bluebells School International 2. Green Fields School 3. DPS R.K. Puram 4. Gurusharan Convent 5. Army Public School, Sankar Vihar 6. Air Force 	Aug, 2016- Dec, 2016

			<p>Golden Jubilee Institute</p> <p>7. SarvodyaKanya Vidyalaya</p> <p>8. Sarla Chopra DAV Public School</p> <p>9. Happy School</p> <p>10. Saplings Preschool</p> <p>11. Sarvodaya Vidyalaya</p> <p>12. Govt Sarvodaya Bal Vidyalaya</p> <p>13. Bhatnagar International School</p>	
4.	Model Making Competition for School students “Sustainable Solutions to Waste Water Remediation”	Chemistry	<p>100 students from 09 schools.</p> <p>1. Delhi Police Public School</p> <p>2. DLDAV Model School</p> <p>3. Don Bosco School</p> <p>4. Darbari Lal DAV Model School</p> <p>5. DAV, Mausam Vihar</p> <p>6. Tagore International School</p> <p>7. DPS, R.K.PURAM, SEC-4</p>	20 th January 2017

			8. Mother's International School 9. Mount Carmel School	
5.	Health camp on the occasion of "Evolvere" the annual Zoological society Festival.	Zoology in association with Fortis hospital, New Delhi	200	March 7, 2017
6.	Mindspar SVC-Ideathon Competition" for undergraduate students	Biochemistry	100 participants from colleges across Delhi-NCR	December 2017 to 15 th February, 2018.
7	LNJ group of school students visit	PHYSICS: experiments on mechanics, optics and electronics were demonstrated	3	8 th April'18
8	Lotus valley school, Gurugram, Haryana	Biochemistry, Chemistry, Electronics	30	March 2019

DBT Star Status College: Outreach programs



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Outreach Programs with schools

**ADOPTION OF
SCHOOL**

“SRIVIDYA”

**GREEN SCHOOL
INITIATIVE**





ADOPTION OF SCHOOL

GSSS , KHANPUR KALAN, SONIPAT (RURAL SECTOR)



College teachers demonstrating experiments to the school students



Workshop for Senior Secondary School Students
Our Department Teachers participated in the workshop conducted under DBT-STAR for the school students at Govt. Senior Secondary School (GSSS), **Bhigan, Sonapat, Haryana in 2015**

“SRI VIDYA” - Open House for Senior Secondary School Students from Govt. Senior Secondary School (GSSS), Khanpur, Kalan, Sonapat in 2016

25 students were given a demonstration and hands on training to perform simple science experiments



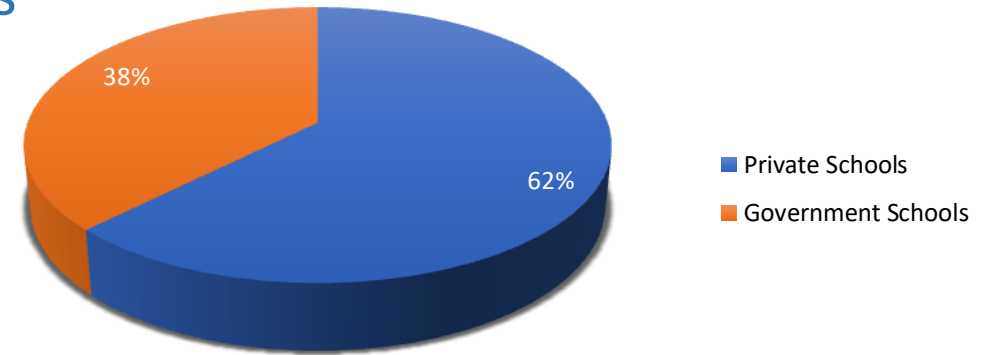
Green School Initiative

An environmental initiative to create awareness among school students



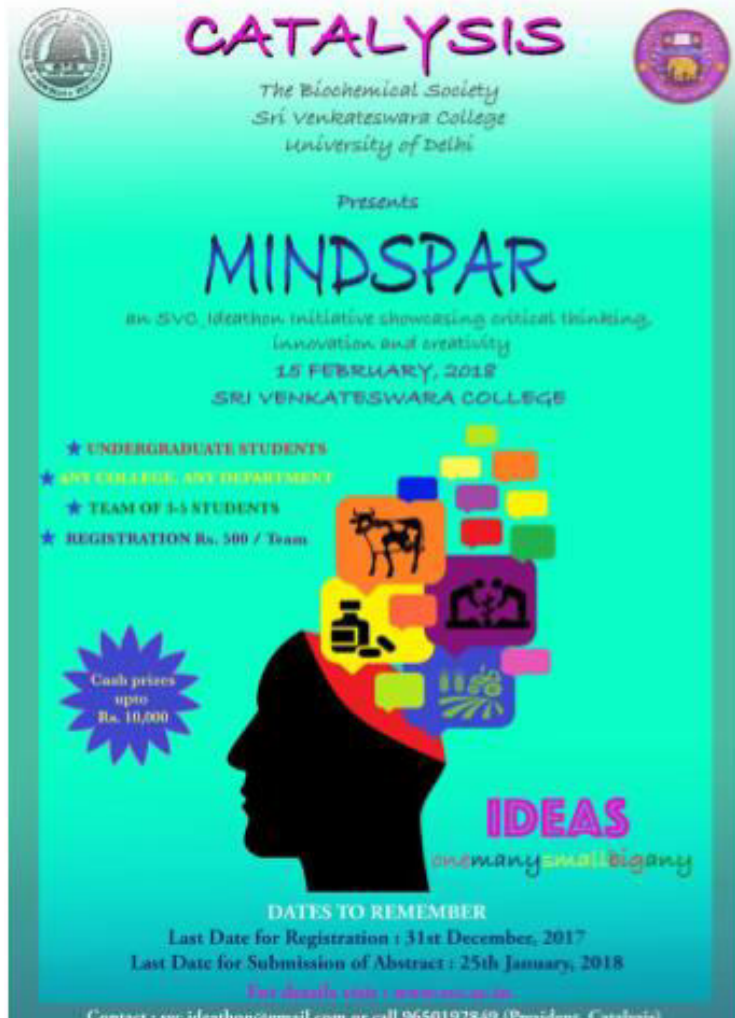
13 Schools
4000 Students

Number of Beneficiaries of the Awareness Programme





MindSpar- An Ideathon Competition.



MindSpar, an ideathon competition for undergraduate students from Delhi-NCR, was organized to motivate and empower young minds to come up with innovative ideas as solutions for pressing societal problems related to pollution, health, environment, food industry and the digital world.

MindSpar1.0

Phase I-29th January, 2018
Phase II-15th February, 2018
More than 25 participating teams

Mind Spar2.0

Phase I- 20th Sept, 2019
Phase II- 4th Nov, 2019
More than 33 participating teams

MindSpar Judges Dr Rupesh Chaturvedi and Dr Sudeshna Mazumdar-Leighton with the MindSpar'18 winner team





Open house for Schools



**LNJ workshop For
Classess XI and XII: 7th-
8th April, 2017**

**Two day workshop on
Advanced Science and Mathematics for Senior Secondary School Students**
7th – 8th April 2017

Jointly Organized by
DBT - STAR STATUS Sri Venkateswara College
and
LNJ Bhilwara Group