



ANNUAL REPORT

2025-26

DR. K V RAO SCIENTIFIC SOCIETY

FRIENDSHIP WITH SCIENCE

Contents

KVRSS at a Glance	03
Leadership Speaks	05
Annual Awards	09
Experiential Learning	22
Science Connect	26
Voices of Inspiration	32



01

KVRSS AT A GLANCE

About KVRSS



Dr. K V Rao Scientific Society

Annual Report 2025-26 03

About KVRSS

The Dr. K V Rao Scientific Society (KVRSS) was established in 2001 in memory of Dr. K V Rao, a distinguished scientist of the Geological Survey of India, Hyderabad, who was a strong advocate of multidisciplinary research. For over 26 years, KVRSS has been committed to fostering scientific temper and promoting STEM (Science, Technology, Engineering, and Mathematics) education among students from school children to young researchers below the age of 30.

Our flagship KVRSS Research Awards have received more than 2,000 applications from over 200 premier institutions across India, with nearly 250 young researchers being honoured for excellence. Many of these awardees now occupy distinguished positions in leading academic institutions, research organisations, and industries worldwide.

At the school level, KVRSS has impacted about 80,000 students through national-level competitions, outreach programs, and experiential STEM initiatives. With the establishment of the Science Innovation Centre and the Mobile Science Lab, students now have opportunities to learn science through hands-on experiments and interactive demonstrations. To multiply this impact, KVRSS also launched the Teach The Teacher program, which equips educators with practical, activity-based STEM teaching methods. 40 Teachers from 12 schools have already benefited from these workshops.

Our major initiatives include:

Research Awards: A prestigious national platform recognising outstanding young researchers in Physics, Chemistry, Biology, and Mathematics.

School Programmes: National-level initiatives such as SPARK, SMART (Science Meets ART), quizzes, and innovation competitions that nurture scientific creativity and problem-solving.

Science Innovation Centre: A dedicated facility offering hands-on STEM learning, mentoring, and concept-based activities for school students.

Mobile Science Lab: Bringing laboratory experiences directly to schools, particularly in underserved and rural areas of Telangana.

Teach The Teacher: Professional development workshops that empower teachers with innovative, low-cost experiential STEM teaching techniques.

Science Safari Camps: Interactive camps that make learning science enjoyable through experiments, games, puzzles, and creative activities.

KVRSS has earned the support of generous individuals, corporate partners including Electronic Arts (EA Hyderabad), OCCF, Tata Group, Amazon, and Microsoft, and collaborations with leading universities, research institutions, colleges and schools. Eminent scientists deliver our Memorial Orations each year, while several former awardees return to mentor and inspire the next generation.

Looking ahead, KVRSS aims to expand its outreach, strengthen collaborations, establish additional Science Innovation Centres, and build robust mentorship programmes that inspire young minds to pursue excellence in STEM.

At KVRSS, we believe in building a lifelong "Friendship with Science" by making STEM education accessible, engaging, and inspiring for every learner.



02

LEADERSHIP SPEAKS

President's Message

Vice President's Message

Secretary's Message



President's Message



Following the successful commemoration of our silver jubilee, KVRSS entered its 26th year with a renewed commitment to our mission of popularising science among young minds, spanning school children to research scholars. We followed this milestone by another highly productive year of impactful activities.

We are especially encouraged by the overwhelming response to programs such as the SPARK Innovation Awards, SMART Awards, School Talent Awards, and Science Quiz contests, through which we have connected with thousands of children, kindled and sustained their passion for science. Our most ambitious initiatives have now taken firm root, thanks to the unwavering dedication of our teachers and senior volunteers. Through carefully curated working models, in-house videos, and immersive hands-on experiences, they have engaged students, sustained their curiosity, and helped them appreciate complex scientific concepts. Today, the Science Innovation Centre receives a steady stream of visits from eager children, while the Mobile Science Lab follows a structured timetable to serve government and private schools lacking lab facilities. These initiatives offer children, especially those from underprivileged backgrounds, the invaluable opportunity to receive expert guidance and work with their own hands by conducting experiments, building working models, and testing their own ideas. We firmly believe this experiential learning is essential for fostering a scientific temper and ultimately, inspiring the next generation to pursue rewarding careers in science.

Our flagship Research Awards for budding scientists continued to draw nationwide participation. We are deeply grateful to our panel of subject-matter specialist judges who meticulously performed the rigorous task of evaluating the research papers and selecting the winners.

Ultimately, our success is built upon the invaluable contributions and active participation of a vast community: the eminent scientists and academicians who mentor us and spend their precious time judging the competitions, especially the Research Award entries, the school and institutional managements, the dedicated teachers and parents who guide the children, and the tireless staff of KVRSS who work around the clock to organise our events. Most of all, we celebrate the participants themselves. The vibrant enthusiasm and exceptional quality of participation seen across our events give us immense confidence that the future of science in India is in safe hands.

We look forward to another remarkable year of growth, driven by the continued support and shared vision of all our stakeholders.

Mr. Anil Kumar Kutty



Vice President's Message



As we reflect on the milestones achieved during the 2025–26 cycle, we celebrate a journey that began over two decades ago with a singular focus: to foster a scientific temper across the nation. Having recently marked our Silver Jubilee, the Dr. K.V. Rao Scientific Society (KVRSS) stands today as a beacon for aspiring scientists, dedicated to bridging the gap between potential and opportunity.

Our commitment remains rooted in the vision of my father, Dr. K.V. Rao, who believed that spreading science awareness is essential to addressing the critical issues of our time. From recognizing individual research excellence to impacting thousands of students annually through our Innovation Centre and Mobile Science Labs, our mission to nurture brilliance continues with renewed vigor and expanded reach.

This mission is driven by the firm belief that a robust foundation in Science, Technology, Engineering, and Mathematics (STEM) is the primary engine for progress. Fundamental sciences provide the bedrock upon which the most complex deep-tech innovations are built. By kindling interest in these core disciplines during students' formative years, we are not merely teaching science; we are preparing the next generation to lead in sophisticated fields such as quantum mechanics and molecular biology. This fundamental understanding is what transforms a curious student into a pioneer of technological breakthroughs.

On a broader scale, India is on a determined march toward becoming the world's third-largest economy by 2030, with scientific ingenuity serving as the primary catalyst for achieving our 'Viksit Bharat' vision for 2047. As we ascend the Global Innovation Index, our nation is consistently pushing technology into new and uncharted frontiers.

Recent breakthroughs highlight this momentum. In the space sector, Skyroot Aerospace has achieved remarkable success with its satellite launch missions, demonstrating the viability of private-sector-led space exploration. Simultaneously, India is making significant strides in quantum computing, with domestic research efforts and strategic partnerships accelerating the development of secure and scalable architectures. Furthermore, the rapid integration of AI across infrastructure, ranging from telecom networks to advanced chip packaging, underscores India's growing role as a hub for deep-tech innovation and indigenous technological resilience. Despite the dual challenges of limited access to advanced technology and low funding allocations, significant innovation continues to thrive.

We propose to conduct webinars and guest lectures featuring global experts to discuss emerging areas. We also propose collaborations with premier research institutes, such as CCMB, to provide students with direct mentorship and access to world-class research facilities.

Realizing these ambitious goals requires a concerted effort from all stakeholders. We extend our deepest gratitude to the generous donors and corporate partners who have supported our Innovation Labs and award programs. As we expand our activities, we fervently appeal to industry leaders and the scientific community for continued financial support, time, and expertise. Together, let us rededicate ourselves to promoting science and ensuring a better, more innovative tomorrow for India.

Mr. Ramamurthy Kolluri



Dr. K V Rao Scientific Society

Annual Report 2025-26

07

Secretary's Message



The year 2025–26 has been another significant milestone in the journey of the Dr. K. V. Rao Scientific Society in promoting scientific temper and experiential STEM education. Through our flagship initiatives, the KVRSS Research Awards, SPARK Innovation Awards, SMART Awards, Science Innovation Centre, Mobile Science Lab, Teach-The-Teacher program, and science outreach activities we have continued to inspire students, teachers, and young researchers through innovation, inquiry, and hands-on learning.

This year, the KVRSS Research Awards received 167 applications from over 25 premier research institutions, while the 15th SPARK Innovation Awards attracted more than 200 projects from over 75 schools across India. The SMART (Science Meets ART) Awards, themed "Board Games Based on Science and Mathematics Concepts," also witnessed participation from around 250 teams, demonstrating how creativity can strengthen STEM learning.

Our Science Innovation Centre and Mobile Science Lab continued to make STEM learning accessible and engaging, benefiting over 2,000 students during the year. The Teach-The-Teacher initiative equipped educators with practical, activity-based teaching methods, while KVRSS also celebrated National STEM Day, National Science Day, Foundation Day, World Food Day, and World Science Day through programmes featuring eminent scientists and educators.

A major highlight of the year was the 25th Annual Function, where we honoured outstanding researchers, innovative students, dedicated teachers, valued partners, and our distinguished judges, whose commitment has made the KVRSS Awards a respected benchmark of excellence. The occasion was further enriched by the unveiling of the KVRSS Anthem, reflecting our enduring values of curiosity, knowledge, innovation, and service to society.

The year also witnessed collaborations with educational institutions and organisations, enabling our Mobile Science Lab to reach government schools in Hyderabad and a village in Yadadri district. We look forward to expanding these outreach activities further in the coming year.

The SMART Awards continue to evolve by encouraging students to communicate science through creative expression. After exploring painting, stories, models, games, and songs in previous years, this year's theme introduces dance as a medium to express science and mathematics concepts. We are grateful to Ms. P. B. Vaishnavi (Dance) and Ms. D Mruduravali (Music) from GITAM Hyderabad, for enthusiastically supporting this initiative.

On a solemn note, we pay tribute to Late Prof. K. Ramaiah, Professor, School of Life Sciences, University of Hyderabad, who served KVRSS for over two decades as a Research Awards judge and Technical Committee member. His wisdom, integrity, and commitment to excellence were instrumental in establishing the high standards of the KVRSS Research Awards. His passing in October 2025 is a great loss to both KVRSS and the scientific community, and we remain committed to upholding the values he cherished.

I sincerely acknowledge the guidance of our President and Executive Committee, the support of our patrons, donors, collaborators, scientists, teachers, volunteers, and the enthusiastic participation of students. As we move forward, KVRSS remains committed to expanding experiential STEM education, fostering innovation, and nurturing a scientifically informed society.

Dr. K Ratna



Dr. K V Rao Scientific Society

Annual Report 2025-26 08

03

ANNUAL AWARDS

Research Awards

SPARK Innovation Awards

SMART (Science Meets ART) Awards



Research Awards

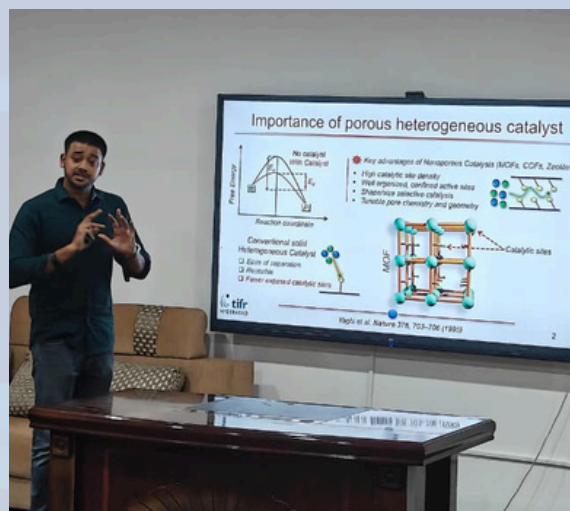
The KVRSS Research Awards recognize outstanding young researchers, below 30 years of age, pursuing doctoral research in Physics, Chemistry, Biology, and Mathematics across India. Established in 2001 with a single award in Chemistry, the program has steadily expanded to include all four disciplines and now attracts participants from research institutions nationwide.

Over the past 26 years, the awards have received more than 2000 applications from around 200 institutions across 25 states, honouring 245 young researchers, many of whom have gone on to distinguished scientific careers.

The awards are evaluated through a rigorous, multi-stage selection process by eminent scientists from leading national institutions, universities, and research organisations, ensuring transparency and merit-based recognition.

In the year 2025-26 the program received 167 applications from scholars representing over 25 premier institutions across India. Shortlisted candidates presented their research before an expert jury, with the top three researchers in each discipline to receive awards during the Annual Awards event.

The KVRSS Research Awards continue to inspire scientific excellence, encourage innovation, and support the next generation of researchers in India.



Research Awards

GANITAM

WINNER



Supriyo Jana

Indian Institute of Technology-Madras, Chennai, Tamil Nadu

Project Title:

Dynamics and Integrability of Polynomial Vector Fields on the n -dimensional Sphere

Project Summary:

Developed new methods to identify and count special repeating patterns that shape how points move on spheres of any dimension over time. The research deepens our understanding of this long-term motion, helps locate periodic, cycle-like patterns common in nature, and improves our ability to solve complex models, including ones describing how interacting species, like predators and prey, evolve together.

Supervisor:

Dr. Soumen Sarkar

RUNNER UP I



Soumak Nag

University of Hyderabad, Hyderabad, Telangana

Project Title:

Asymptotic Behavior of an Age-structured SIS Model with Nonlinear Force of Infection

Project Summary:

Developed a mathematical model to study how infectious diseases spread when people's movement is limited within a region. The results can help better predict disease outbreaks and design more effective strategies to control the spread of infections.

Supervisor:

Prof. Suman Kumar Tumuluri

RUNNER UP II



Arghya Chongdar

Indian Statistical Institute, Bengaluru, Karnataka

Project Title:

A Minimal Completion Theorem and Almost Everywhere Equivalence of Completely Positive Maps

Project Summary:

Discovered a mathematical rule that takes a partially broken or incomplete "instruction manual" for shifting quantum energy and perfectly fills in the missing pieces in the cleanest way possible. They then used this rule to prove that if two of these quantum energy maps look almost identical on paper, they are actually exactly the same.

Supervisor:

Dr. B. V. Rajarama Bhat



Research Awards

BHOUTIKAM

WINNER



Gourav Dwari

Tata Institute of Fundamental Research, Mumbai, Maharashtra

Project Title:

Evidence of Skyrmionic Phase in a Centrosymmetric Antiferromagnet $\text{GdNi}_{0.4}\text{Si}_{1.6}$ Single Crystal

Project Summary:

Found evidence of tiny magnetic whirlpools called skyrmions in a special material at very low temperatures. This discovery could help in the future development of faster, more energy-efficient electronic devices and better data storage technologies using these magnetic whirlpools.

Supervisor:

Prof. A. Thamizhavel

RUNNER UP I



Anindita Karmakar

Saha Institute of Nuclear Physics, Kolkata, West Bengal

Project Title:

Measurement of Enhanced Electric Dipole Transition Strengths at High Spin in ^{100}Ru : Possible Observation of Octupole Deformation

Project Summary:

Discovered evidence that the atomic nucleus of ruthenium-100 may have a rare pear-shaped structure instead of the more common symmetric shape. This finding helps a better understanding of how atomic nuclei are formed and behave.

Supervisor:

Prof. Sukalyan Chattopadhyay

RUNNER UP II



Payal Priyadarshini Pradhan

National Institute of Technology, Warangal, Telangana

Project Title:

Development of Novel, Stable, Efficient and Unclonable Nanoscale Luminescent Ink for Advanced Anti-counterfeiting Applications

Project Summary:

Developed a special security ink (Europium ion activated Y_2SrZnO_5 nano ink) that is invisible in normal light but glows bright red under ultraviolet (UV), and blue light, making it useful for protecting currency and important documents from counterfeiting. The ink is highly durable and continues to work even after exposure to heat, moisture, sunlight, and other harsh conditions.

Supervisor:

Prof. D. Haranath



Research Awards

JEEVANAM

WINNER



Simran Rawal

Tata Institute of Fundamental Research, Hyderabad, Telangana

Project Title:

Edge Curvature Drives Endoplasmic Reticulum Reorganization and Dictates Epithelial Migration Mode

Project Summary:

Discovered that cells can sense the shape of a wound and change the way they move to heal it more effectively. This finding improves our understanding of how wounds heal and could help researchers develop better treatments to repair damaged tissues.

Supervisor:

Dr. Tamal Das

RUNNER UP I



Achyutham V Durga Prasad Hotha

Karnatak University, Dharwad, Karnataka

Project Title:

Reproductive Stress Response in Male Black Molly Poecilia Sphenops: Evidence for Receptor Specific Regulation by GABA

Project Summary:

Found that stress increases the activity of a brain chemical called GABA, which raises stress hormone levels and suppresses reproduction in a fish model. Blocking a specific GABA receptor helped protect the fish, opening new possibilities for understanding stress-related reproductive problems.

Supervisor:

Dr. C. B. Ganesh

RUNNER UP II



Jayanti Kumari

Indian Institute of Science, Bengaluru, Karnataka

Project Title:

Distinct Filament Morphology and Membrane Tethering Features of the Dual FtsZ Paralogs in Odinarchaeota

Project Summary:

Studied special proteins from hot spring ancient microbes called Asgard archaea to understand how the cell skeleton in complex organisms, including humans, may have evolved. The findings provide new clues about how cells changed over millions of years to become more advanced and complex how it is now.

Supervisor:

Dr. Saravanan Palani



Research Awards

RASAYANAM

WINNER



Deepak Kumar Patel

Indian Institute of Technology-Madras, Chennai, Tamil Nadu

Project Title:

Macropolyhedral syn-B18H22, the "Forgotten" Isomer

Project Summary:

Discovered that a boron-based material, syn-B18H22, once thought to be unable to glow can actually emit light, and synthesized derivatives to make it glow in different ways. This breakthrough, opens new possibilities for advanced sensors, lasers, photonics, and next-generation electronic devices.

Supervisor:

Prof. Sundargopal Ghosh and Prof. Thalappil Pradeep

RUNNER UP I



Monojit Roy

Indian Institute of Science Education and Research, Mohali, Punjab

Project Title:

Consecutive Multiphoton-Mediated Defluorinative Amination of Fluoroarenes

Project Summary:

Used a special dye that traps visible light to break the ultra-strong chemical bonds in specific fluorine-containing molecules. In traditional photochemistry one catalyst can absorb one packet of light here this unique molecule can absorb upto three packets of light in a row, this catalyst gains enough energy to easily swap out the fluorine atoms and generate carbon-nitrogen bond to create new molecules under very mild photochemical conditions. This discovery could make it easier and more environmentally friendly to produce medicines and other important chemicals.

Supervisor:

Dr. Debashis Adhikari

RUNNER UP II



S Revathy

University College of Science, Osmania University, Hyderabad, Telangana

Project Title:

Sustainable Forensic Drug Analysis: Magnetic Nanoparticle based extraction from Edible Matrices and Analytical Detection using RP-HPLC/LC-MS with Green and White Comparative Study

Project Summary:

Developed a new, environmentally friendly method to detect the modern date rape drug olanzapine when it has been secretly mixed into food. This quick and accurate technique could help forensic scientists and food safety experts identify cases of drug tampering more effectively.

Supervisor:

Dr. P. Muralidhar Reddy

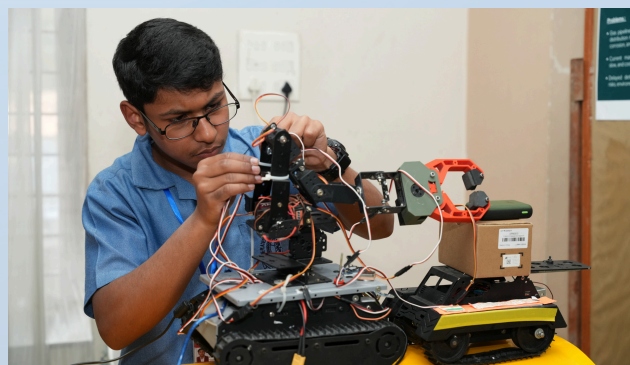


SPARK Innovation Awards

Since its inception in 2012, the SPARK program has served as a cornerstone initiative for KVRSS, dedicated to cultivating creativity, critical thinking, and problem-solving abilities among young learners. By fostering a spirit of scientific inquiry, the program provides a vital platform for students to exchange ideas, collaborate, and explore the limitless possibilities within Science and Mathematics.

Originally launched in Andhra Pradesh, SPARK has evolved into a nationwide initiative, drawing significant participation from across India. For the 2025-26 edition, the Society received over 200 project submissions from more than 75 schools. Following a rigorous two-stage screening process, 40 outstanding projects were selected for the final presentations, with 10 finalists representing each of the four categories: Ganitam (Math), Rasayanam (Chemistry), Bhoutikam (Physics), and Jeevanam (Biology).

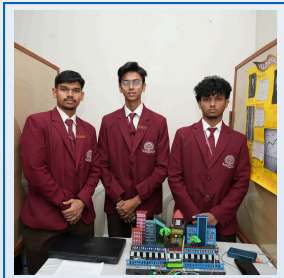
The final evaluation, held in Hyderabad, featured a distinguished panel of scientists, educationists, and subject-matter experts. Following a comprehensive assessment of the finalists' presentations and innovative methodologies, the top four projects in each category were selected for the annual SPARK awards. These recognitions underscore the dedication of the participants and the Society's ongoing commitment to nurturing the next generation of scientific innovators.



SPARK Innovation Awards

GANITAM

WINNER



Anubhav Mukherjee, Aditya Nandy & Shubham Guie

Class 11, Vivekananda Mission School, Kolkata, West Bengal

Project Title:

Dynamic Traffic Analysis: Merging Video-Inspired Concepts with Mean Value Theorem

Project Summary:

The project demonstrates how the Mean Value Theorem connects a vehicle's average speed over a road segment with its instantaneous speed at a specific moment. Using a simulation of traffic movement between two checkpoints, it illustrates a practical application of calculus in traffic monitoring, speed analysis, and road safety.

Guide Teacher:

Mr. Soumya Bhatta

RUNNER UP



Aditya Choithani, Nidhir Bardhan & Akshat Hatwal

Class 11, Tagore International School, Vasant Vihar, New Delhi

Project Title:

Alloc8 - Fair Resource Distribution Model

Project Summary:

Alloc8 is a mathematical framework that uses optimization, graph theory, probability, and fairness-based algorithms to ensure fast and equitable distribution of resources in crisis-affected regions. By transforming complex humanitarian logistics into efficient mathematical models, it enables rapid, unbiased, and need-based decision-making for disaster response.

Guide Teacher:

Ms. Ruchi Gupta

CONSOLATION



Vibha Myneni, Arigela Srivatsankita & Divvela Riya

Class 9, Bharatiya Vidya Bhavans Atmakuri Ramarao School, Hyderabad, Telangana

Project Title:

B3 - Brains Before Bulbs

Project Summary:

The project demonstrates how binary digits (0s and 1s) can be used to encode and decode secret messages using switches and bulbs. It shows how the same mathematical principles behind computers also appear in patterns found in nature, making binary numbers easy and fun to understand.

Guide Teacher:

Ms. M. V. S. Narasamamba

CONSOLATION



Harsimar Singh Dargan

Class 10, Scottish High International school, Gurgaon, Haryana

Project Title:

A Game - Theoretic Analysis and Novel Solution for India's JEE Counselling System

Project Summary:

The project explains how the JoSAA admission system can make students choose colleges and branches based on expected cut-off ranks instead of their true interests. Using mathematics and game theory, it shows how this can lead to less suitable college admissions and unnecessary stress for students.

Guide Teacher:

Mr. Pawan Mittal

SPARK Innovation Awards

BHOUTIKAM

WINNER



Medhansh Kumar

Class 9, Bluebells School International, Kailash, New Delhi

Project Title:

Gas Risav Niyantrak - Inspectron System

Project Summary:

The project uses an intelligent robotic system with a pipeline inspection robot and a drone to detect gas leaks, cracks, and corrosion before they become serious problems. It can monitor pipelines in real time and perform minor repairs, making pipeline maintenance safer, faster, and more reliable.

Guide Teacher:

Ms. Neeru Bhushan

RUNNER UP



Divij Sharma & Prerit Amin

Class 9, Anand Vidya Vihar, Vadodara, Gujarat

Project Title:

Growlite

Project Summary:

The project is a low-cost autonomous drone that monitors crop health using cameras and environmental sensors. It displays all the information on a single dashboard and alerts farmers when it detects problems, helping them take timely action.

Guide Teacher:

Ms. Nasla A. A.

CONSOLATION



Gauhar Singh

Class 8, Tagore International School, Vasant Vihar, New Delhi

Project Title:

Impact Ease: Shock-Absorbing Car Seat using Non-Newtonian Fluids

Project Summary:

Developed a smart car seat that uses a special non-Newtonian fluid to stay soft during normal driving and become firm during sudden impacts for better protection. It improves comfort and safety while providing an eco-friendly and portable seating solution.

Guide Teacher:

Ms. Chetna Sawhney

CONSOLATION



Agamjot Kaur & Anika Sharma

Class 8 & 7, Tagore Interantional School, Vasant Vihar, New Delhi

Project Title:

Towards Healthy Spines: AI-Powered Smart School Bags

Project Summary:

Developed AI-enabled smart school bag straps that detect poor posture, heavy loads, and uneven weight while students carry their bags. It provides instant alerts and posture reports to help students develop healthy habits and reduce the risk of back and spine problems.

Guide Teacher:

Ms. Nidhi Dimri



SPARK Innovation Awardees

JEEVANAM

WINNER



Avni Dwivedi

Class 11, Scottish High International School, Gurgaon, Haryana

Project Title:

Cool Roof

Project Summary:

Developed eco-friendly roof tiles made from coconut husk and polymer latex that keep houses 7–9°C cooler without using electricity. The tiles are affordable, sustainable, and can provide a better alternative to plastic roofing, especially in villages and less urbanized areas.

Guide Teacher:

Ms. Akanksha Yadav

RUNNER UP



Anvesha Gaur & Riza Qureshi

Class 10, Uttam School For Girls, Ghaziabad Uttar Pradesh

Project Title:

Miraqua

Project Summary:

Developed Miraqua, an AI-powered smart buoy that monitors the sea to detect illegal fishing and other activities that harm marine life. It sends real-time alerts to authorities, helping protect marine biodiversity and conserve ocean ecosystems.

Guide Teacher:

Ms. Yamini Gupta

CONSOLATION



K V Sai Deepansh, T Likhith Kishore & D Sai Tulyasree

Class 8, Bharatiya Vidya Bhavan's Atmakuri Rama Rao School, Hyderabad, Telangana

Project Title:

Green Eye - Autonomous Plant Disease Detection Rover for Sustainable Crop Management

Project Summary:

Developed an autonomous rover to detect plant diseases by capturing and analyzing leaf images as it moves through the field. It sends the plant's location and suitable natural treatment to the farmer's mobile phone, helping improve crop health with precise and eco-friendly farming.

Guide Teacher:

Ms. Ratna Veni Veludandi

CONSOLATION



Subhaditya Sundar Ray

Class 8, DAV Public School, Chandrasekharapur, Bhubaneswar, Odisha

Project Title:

Seizure Alert

Project Summary:

Developed a wearable device that detects possible seizure emergencies by monitoring heart rate and blood oxygen levels. It automatically sends alerts, makes emergency calls, and shares the user's live location, helping ensure quick medical assistance.

Guide Teacher:

Mr. Jyoti Ranjan Mohanty

SPARK Innovation Awards

RASAYANAM

WINNER



Thumma Sansitha & Shreya Vidyashankar

Class 9, Bharatiya Vidya Bhavan's Atmakuri Rama Rao School, Hyderabad, Telangana

Project Title:

Sip, Save, Style: Reinventing Milk Packets for Sustainable Living

Project Summary:

The project shows how used milk packets can be recycled into a strong, flexible, and waterproof fabric. The fabric is then used to make useful products like bags and folders, helping reduce plastic waste and promote sustainable living.

Guide Teacher:

Ms. M. Srilakshmi

RUNNER UP



Kavish Patra

Class 7, Cambridge School, Srinivaspuri, New Delhi

Project Title:

Role of Nanoparticles in Protecting our Cultural Heritage

Project Summary:

Developed "Invisible Trio Shield" nanoparticles made of three materials, Titanium dioxide to clean dirt using sunlight, silicon dioxide pushes water away to stop soaking, and calcium hydroxide fills small cracks by slowly turning into limestone. Together, they form a transparent and eco-friendly coating that keeps monuments clean, dry, and stronger from inside.

Guide Teacher:

Ms. Divya Chawla

CONSOLATION



A Kaushik Kumar, B Paramasivan & B Jithesh Reddy

Class 9, Atomic Energy Central School - 2, Hyderabad, Telangana

Project Title:

IoT-Based Smart Alcohol Detection and Engine Lock System

Project Summary:

The model, a low cost and portable system, detects alcohol in a driver's breath before the vehicle starts and automatically project locks the engine if alcohol is detected. It also sends a real-time alert through the internet, helping prevent drunk driving and improve road safety.

Guide Teacher:

Mr. Santhosh Kumar Budharpu

CONSOLATION



Innayat Kaur Bedi & Nilakshi Gupta

Class 9, Spring Dale Senior School, Amritsar, Punjab

Project Title:

From Fabric to Fibre

Project Summary:

The project shows how textile and agricultural waste can be turned into useful products instead of being thrown away. It promotes sustainability, creativity, and community participation while encouraging people to reduce waste and protect the environment.

Guide Teacher:

Ms. Aakriti



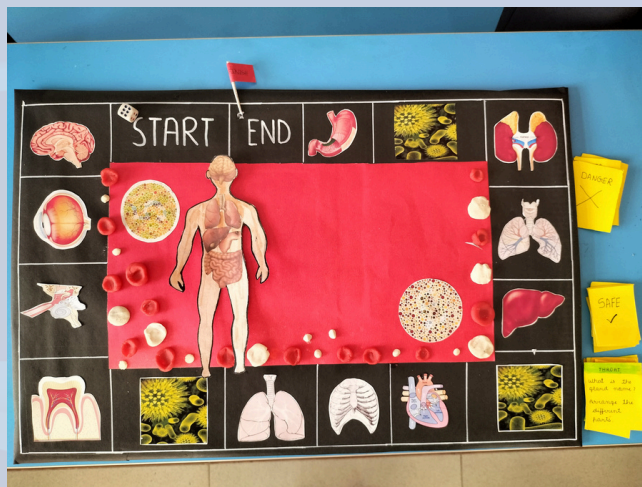
SMART (Science Meets ART) Awards

The main aim of this competition is to visualize Science Concepts. Understanding science concepts is important as it can be easily linked to our daily activities and requirements, thus highlighting the importance of science in daily life.

Each year students from across India, from the curious 7th graders to the seasoned 12th, are challenged to transform scientific concepts into breathtaking artwork. Thus, the KVRSS SMART Awards, celebrates the intersection of science and art, and its endeavour is to ignite imagination of students and give a visual aspect to science.

The theme for the year 2025-26 was presenting the artwork as “Board Games” based on Science and Math concept/s. Board games lead to conceptual clarity, systems thinking, and creativity. Students were given the challenge to create a Board game based on any concept/s in Science or Math to make the concept exciting and easy to understand and make learning engaging and interactive.

Over 250 teams from more than 65 schools across India participated in the event and after a multilevel selection the following students were selected for the awards.



SMART (Science Meets ART) Awards

WINNER



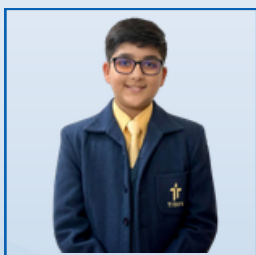
Gauri Sharma & Renu Pillai

Class 9, Freedom International School,
Bengaluru, Karnataka

Project Title:
InfecTo Quest



RUNNER UP I



Md Izaan Khan

Class 7, Tagore International School,
Vasant Vihar, New Delhi

Project Title:
Code Red Lab Breakout



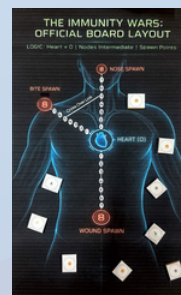
RUNNER UP II



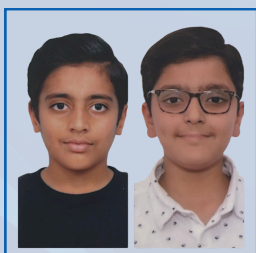
Kartik Chaudhary

Class 7, Scottish High International School,
Gurgaon, Haryana

Project Title:
Immunity Wars



CONSOLATION



Tanush Ghei & Ayaansh Gupta

Class 8, The Heritage School,
Rohini, New Delhi

Project Title:
PHOTOSYNTHESIS: The Game of Growth



CONSOLATION



P Dhikshitha & S Bhavishya

Class 8, Chipotle School, Madhura Nagar,
Hyderabad, Telangana

Project Title:
Cell Voyage: The Journey inside life



04

EXPERIENTIAL LEARNING

Concept Classes

Teach The Teacher

Collaborative Outreach



Concept Classes

At KVRSS, science is not a static list of facts to be recited; it is a living, breathing language that explains the very various phenomena of our world.

For many students, especially in government and small private schools, the barrier to a STEM career isn't a lack of intelligence, it is a lack of equipment and mentorship. KVRSS is dismantling this barrier by redefining the classroom teaching through its following initiatives:

The Innovation Centre (IC): A place for curiosity where students dive deep into Physics, Biology, Chemistry, and Math. With kits to learn around 50 concepts the place has become a hub of learning and creativity.

The Mobile Science Lab (MSL): The "Lab on Wheels" that travels directly to school doorsteps. Whether it's balancing nails to master the Centre of Gravity or exploring Static Electricity, the lab brings the laboratory to the student.

KVRSS has transformed the way students interact with complex principles. Apart from hands-on learning for the students, science is turned into a fun adventure with jigsaw puzzles, crosswords, and hands-on model building. Over the last four years, more than 10,000 students have stepped into this world, with conceptual understanding jumping by a remarkable 60% to 80%.

Thus KVRSS is doing more than teaching curriculum, we are cultivating a generation of problem-solvers, critical thinkers, and innovators. By turning schools into laboratories and sparking curiosity, we are ensuring that every student has the chance to look at Science as something to do and no longer something to read about.



Teach the Teacher

As a part of the "Teach The Teacher" initiative, the Dr. K. V. Rao Scientific Society (KVRSS) conducted a one-day immersive workshop "Experiential Learning in Science & Mathematics and Inspiring Young Minds" at its Science Innovation Centre on 28th April 2026. The workshop brought together 25 teachers from Sherwood Public School & Heritage Valley - The Indian School, primary, middle, and senior school teachers for an engaging professional development program focused on activity-based, student-centered learning.

The programme combined presentations, hands-on activities, group discussions, and collaborative learning, with an emphasis on connecting classroom concepts to real-life experiences.

Key sessions included:

- Introduction to KVRSS and its mission to promote hands-on STEM education
- Ice-breaker activities using simple materials to enhance curiosity
- Sharing of teaching practices, enabling teachers to exchange innovative classroom strategies and technology-enabled approaches.
- Experiential Learning session, highlighting storytelling, real-life examples, and inquiry-based pedagogy to improve conceptual understanding.
- Hypothesis-based design challenge, where teachers modified an activity based on their own ideas, encouraging creativity, experimentation, critical thinking, and peer learning.

The workshop enabled teachers to:

- Strengthen their understanding of experiential and inquiry-based learning.
- Connect scientific and mathematical concepts with everyday life.
- Gain confidence in using low-cost, hands-on teaching methods.
- Enhance collaborative teaching practices and classroom innovation.
- Foster curiosity, creativity, and critical thinking among students.

Participants expressed enthusiasm for implementing these approaches in their classrooms and welcomed opportunities for continued collaboration with KVRSS through future teacher training and student enrichment programmes.

Through initiatives such as "Teach The Teacher," KVRSS continues to empower educators with practical, innovative, and scalable teaching practices that inspire the next generation of scientific thinkers.



Collaborative Outreach

As part of the Science Concepts Demonstrations conducted through the Mobile Science Lab, many organisations invite KVRSS to collaborate for their outreach events and visits various government schools to promote scientific understanding among students.

Under this initiative, KVRSS collaborated with Ishva Foundation and visited ZPHS Gachibowli and GHS Round Table, Film Nagar. In collaboration with RBVR Reddy Women's College, MSL visited ZPHS Veerareddy Palli, Yadadri District. Demonstrations covering key concepts in Math, Physics, Chemistry, and Biology were conducted for students. Students explored the Mobile Science Lab, which houses various scientific models, and interacted with resource persons who guided them through multiple experiments and activities both inside and outside the lab. About 450 students from classes 7 to 10 participated in the programs.

Some of the concepts covered include Chromatography, Air pressure, Centre of gravity, Static electricity, Convection, Centripetal and Centrifugal forces, Laws of motion, Momentum and Friction, Surface Tension, Algebraic entities, Geoboards

These programs successfully move STEM learning from textbooks to understanding through doing. By the end of the sessions, the students not only witnessed but were also part of experiential learning which will help them in long-term educational retention.



05

SCIENCE CONNECT

World Food Day

World STEM Day

World Science Day

Foundation Day

National Science Day



World Food Day

To mark World Food Day, celebrated globally on October 16th, the Dr. K. V. Rao Scientific Society organized an engaging program on October 15, 2025, to highlight the importance of nutritious food and healthy eating habits among students.

The event brought together around 65 students from 10 schools, who participated enthusiastically in a series of interactive puzzles and games themed around food and nutrition.

The students were inspired by the talk by Dr. Anjali Devi, Professor of Nutrition, who emphasized the value of balanced nutrition for overall well-being. She engaged the students through fun activities and discussions, turning the session into a lively learning experience.

The program not only enhanced students' understanding of healthy food choices but also inspired them to adopt better eating habits for a healthier future.

All the participants were given goody bags graciously sponsored by Bambino.



World STEM Day

National STEM Day is celebrated annually on November 8 to inspire and encourage interest in Science, Technology, Engineering, and Mathematics (STEM) among students of all ages. The day underscores the importance of STEM education and careers in shaping the future of innovation, discovery, and progress.

Dr. K. V. Rao Scientific Society organized a special online program on November 8, 2025, to commemorate the occasion. The event witnessed enthusiastic participation from approximately 200 students from Classes 9 to 12, representing five schools, Daksha School, Hyderabad, Delhi Public School, Raipur, Paramita Heritage School, Karimnagar, Bal Bharathi Public School, New Delhi and Vivekananda Mission School, Kolkata.

The guest speaker for the session was Dr. Kunal Dayma, Expert Scientific Writer at Ocugen, Former Scientist at the Centre for Cellular and Molecular Biology (CCMB) and an earlier KVRSS Awardee. The interactive session, titled "Carbon and Carbon Balls," focused on the element carbon, its structure, various allotropic forms, and its occurrence in nature. Dr. Dayma provided deep insights into the fundamental importance of carbon in scientific and industrial contexts, fostering curiosity and understanding among the students.

Dr. Kunal Dayma encouraged young learners to think critically, answered their questions and made them part of the discussions. The discussion included information about the molecular structures that form the basis of life and materials science. It served as an engaging platform to nurture scientific temperament and appreciation for the wonders of chemistry and material science.



World Science Day

To celebrate World Science Day for Peace and Development, observed annually on November 10, the Dr. K. V. Rao Scientific Society organised an engaging science program for around 40 students of Classes 9 and 10 from Daksha, Nalanda, Sreenidhi, Radiant, and Academic Heights School (Kukatpally).

The guest scientists, Prof. P. K. Thiruvikraman and Prof. Aravinda Raghavan from the Physics Department, BITS Pilani Hyderabad Campus, conducted an interactive session titled "Paper Wings and Superballs: A Journey of Discovery."

Students worked in teams to design and test innovative paper copters, formulating hypotheses and exploring how variables such as wing size, angle, and shape affected their descent. They then witnessed exciting demonstrations on momentum, energy transfer, and Newton's Cradle, using different types of balls to understand fundamental physics concepts.

The hands-on activities encouraged creativity, critical thinking, and scientific inquiry, helping students appreciate the role of science in understanding everyday phenomena. The program was widely appreciated for making science both engaging and enjoyable.



Foundation Day

KVRSS Foundation Day is observed annually on January 9, marking the establishment of the Foundation in 2001 in honor of the late Dr K V Rao, a committed advocate for the promotion of young scientists. KVRSS organized a special program on 9th January 2026 to commemorate the day.

The event was graced by Mr Pavan Kumar, former Managing Director, NFCL (Nagarjuna Chemicals and Fertilizers Limited), as the Chief Guest. Other dignitaries present included Mr Anil Kumar Kutty, President, KVRSS; Dr V. Shankarnath; Dr P. Anil Kumar, Associate Professor, Department of Biochemistry, University of Hyderabad and KVRSS Research Awardee (2007); Mr Vamshi Krishna, Principal, Radiant High School; and Ms Mrudula, Teacher, Sreenidhi School. Teachers and students from the participating schools also attended the program.

Students from Sreenidhi School presented experiments on “Acids and Bases” using different solutions and indicators. Students from Radiant High School demonstrated the concept of “Reflection and the Laws of Reflection” using appropriate materials.

Dr. Anil Kumar shared his personal experiences with KVRSS, recounting how he received the KVRSS Research Award on his third attempt and emphasizing the value and encouragement the award provides to researchers. The Chief Guest spoke about sustainability and interacted with students and other participants, making the program both informative and inspiring.



National Science Day

In commemoration of National Science Day, celebrated annually on February 28th to honour Sir C.V. Raman's landmark discovery of the 'Raman Effect,' KVRSS conducted an immersive educational program at Girls High School, Sultan Bazar, on February 27, 2026.

The session engaged approximately 100 students from Classes VII to IX, providing them with a comprehensive introduction to core scientific principles across Physics, Chemistry, Biology, and Mathematics. Through a series of interactive demonstrations and hands-on experiments, the KVRSS team facilitated an experiential learning environment that bridged the gap between theoretical classroom knowledge and real-world application.

A key highlight of the event was the multilingual reflection segment, where students articulated the significance of National Science Day and the broader impact of science on daily life. By presenting their insights in Telugu, Hindi, and English, the students not only demonstrated a deep conceptual understanding but also showcased the power of multilingual communication in scientific presentation. This initiative successfully fostered a spirit of inquiry and appreciation for the scientific process among the participants.



06

VOICES OF INSPIRATION

Memorial Orator
Chief Guest



Memorial Orator



Dr. Tessy Thomas, FNAE

Vice Chancellor

Noorul Islam Centre for Higher Education (NICHE), Kanyakumari

Distinguished Scientist

Former Director General (Aeronautical Systems), DRDO

Oration Topic: Advances in Aerospace Systems

Dr. Tessy Thomas is one of India's foremost aerospace scientists and a pioneering leader in missile technology. She currently serves as the Vice Chancellor of Noorul Islam Centre for Higher Education (NICHE), Kanyakumari, after an illustrious career spanning over three decades at the Defence Research and Development Organisation (DRDO).

An Electrical Engineering graduate from Government Engineering College, Thrissur, she earned her M.E. in Guided Missiles from the Defence Institute of Advanced Technology (formerly IAT), Pune, an MBA from IGNOU, and a Ph.D. in Missile Guidance from Jawaharlal Nehru Technological University (JNTU), Hyderabad. She has been conferred 14 Honorary Doctorates (D.Sc./D.Litt.) by leading universities across India in recognition of her outstanding contributions to science, engineering, and higher education.

Joining DRDL, Hyderabad, in 1988, Dr. Thomas played a pivotal role in India's strategic missile programme. She developed advanced guidance systems for the Agni missile series and led the successful development of Agni-IV as Project Director and Agni-V as Project Director (Mission). As Director of the Advanced Systems Laboratory and later as Director General of DRDO's Aeronautical Systems Cluster, she provided leadership in the development of strategic missile systems, unmanned aerial vehicles, aircraft technologies, aero-engine systems, airborne surveillance platforms, and other advanced defence technologies.

A Fellow of several prestigious professional academies, including the Indian National Academy of Engineering (FNAE), she has served on numerous national scientific and educational bodies, including the IIT Council, the Scientific Advisory Committee to the Cabinet, the Indian National Commission for Cooperation with UNESCO, and the Boards of leading academic institutions.

Dr. Tessy Thomas has received numerous national honours for her exceptional contributions to science, technology, and national defence. Her recent recognitions include the Times of India Women Achiever Award (2026), Kerala Sasthrapuraskaram (2024), the highest science award of the Government of Kerala, the ET NOW Lifetime Achievement Award (2025), The Hindu Excellence in Education, Science and Technology Award (2025), the Lokmanya Tilak National Award (2022), the H.K. Firodia Jeevan Gaurav Award (2022), the DRDO Technology Leadership Award (2019), the First Ladies Award presented by the Hon'ble President of India (2018), and the Eminent Engineer Award from the Engineering Council of India (2020). Widely known as the "Missile Woman of India," she continues to inspire generations of scientists, engineers, and students through her remarkable contributions to science, technology, and education.



Chief Guest



Prof. Anuradha Jonnalagadda

Vice-Chancellor, University of Hyderabad and
Head, Department of Dance, Sarojini Naidu School of Arts &
Communication, University of Hyderabad

Prof. Anuradha is a distinguished Kuchipudi exponent, scholar, choreographer, and educator with over three decades of contributions to Indian classical dance. She heads the Department of Dance at the University of Hyderabad, where she has played a pivotal role in advancing dance education, research, and performance.

She earned her Bachelor's degree in Arts from Osmania University, followed by a Master of Performing Arts from the University of Hyderabad, graduating as the university topper. She subsequently completed her Ph.D. in Dance at the University of Hyderabad with a doctoral thesis titled Tradition and Innovations in Kuchipudi Dance. Her academic interests include the socio-cultural history of Kuchipudi, dance pedagogy, performance studies, movement analysis, interdisciplinary research, and the critical study of dance traditions.

An accomplished author and editor, Prof. Anuradha has published books, monographs, and numerous scholarly articles on the history, evolution, and aesthetics of Kuchipudi. She has also contributed chapters to several authoritative volumes on Indian dance and cultural history.

As an internationally acclaimed performer with over a thousand stage presentations, she is an 'A Top' graded artist and has represented India at prestigious national and international festivals, including the Khajuraho Festival, Festival of India, Sangeet Natak Akademi festivals, and Kuchipudi Mahotsavs. Her innovative choreographic productions, such as Mahakali, Namostu Naari, Chhaya, and Aapas – An Ode to Water, seamlessly blend classical traditions with contemporary themes.

A dedicated mentor, she has guided 11 doctoral scholars and is currently supervising several more. She has served on numerous academic, advisory, and syllabus committees of leading institutions, including IGNOU, Kerala Kalamandalam, Potti Sreeramulu Telugu University, Andhra University, Madras University, Pondicherry University, IGNC, the Sangeet Natak Akademi, NAAC, and the UGC, making significant contributions to dance education and research in India.

Donation Form

Dear Sir / Madam,

I would like to Donate for the Corpus / General / Specific program of the Society (Mention programme name).

Name: (Prof. / Dr. / Ms. / Mr. / M/s.) _____

Parent(s) / Spouse Name: _____

Age : _____

Qualifications: _____

Designation: _____

Organization: _____

Address for correspondence: _____

Phone: (O) _____

(R) _____

Mobile: _____

Fax: _____

Email: _____

PAN¹: _____

Mode of Payment: Bank Transfer/Cash/DD/Cheque

DD/Cheque No. _____ Date _____ Bank: _____ Amount Rs.: _____

Please send your Contributions to:

National INR Contributions

Bank Name : BANK OF MAHARASHTRA

A/c Name : K V Rao SCIENTIFIC SOCIETY

A/C number : 20044701110

Branch : Khairatabad, Hyderabad

MICR Code :

IFSC Code : MAHB0000918

International Contributions

Bank Name : State Bank of India

Account name: Dr K V Rao Scientific Society

Account Number: 39985708480

Branch Code: 00691

IFSC Code : SBIN0000691

SWIFT code : SBININBB104

Address: FCRA Cell, 4th Floor, State Bank of India, New Delhi Main Branch, 11, Sansad Marg, New Delhi 110001

I have read the terms and conditions of the rules and regulations of the Society and abide by the same. The above information provided is correct.

Date: _____

Place: _____

Signature of Donor

NAME: _____

NOTE:

¹ Please attach the attested photocopy of the PAN Card.

- The complete form along with the amount by DD/Cheque in favour of "Dr. K V Rao Scientific Society" payable at Hyderabad to be sent to: Dr. K Ratna, Secretary, Dr. K V Rao Scientific Society, 84, Siddhartha Nagar, Vengal Rao Nagar P.O., Hyderabad – 500 038.
- The Society is registered under the Public Societies Registration Act
- The Society has 80G exemption under Income Tax Act
- The Society is also registered under the FCRA Act and is eligible for foreign donations





Dr. K V Rao Scientific Society

Friendship with Science

8-3-169/84, Friendship Heights, Siddhartha Nagar, Vengal Rao Nagar P.O., Hyderabad - 500038

Visit Us: www.kvrss.org, Email Us: contact@kvrss.org, drkvraoss@gmail.com

Call Us: 70936 01588, 99594 44933, 99596 64000, 70936 00794