

COMPENDIUM ON SCIENCE OUTREACH ACTIVITIES CONDUCTED IN KREIS RESIDENTIAL INSTITUTIONS 2024 - 2025

A Collaborative Initiative of:

- 1) Karnataka State Council for Science and Technology (KSCST)**
- 2) National Council for Science and Technology Communication (NCSTC), Department of Science and Technology, Government of India**
- 3) Karnataka Residential Educational Institutions Society (KREIS)**
Department of Social Welfare, Government of Karnataka
- 4) Science for Rural India – IISc Ph.D. Scholars Group**

Principal Co-ordinator
Dr. U. T. Vijay, Executive Secretary

Coordinator
Mr. K. N. Venkatesh, Senior Project Engineer

February 2025



KARNATAKA STATE COUNCIL FOR SCIENCE AND TECHNOLOGY

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Date	KREIS Institution Name	School code	Address	Page No.
14th September 2024	Masti Venkatesha Iyengar Residential School (BC)	247	Masti - 5631295, Uladenahalli Post, Kolar District	21 - 35
	Morarji Desai Residential School (ST)	144	Rajenahalli, Kolar District	36 - 47
26th October 2024	Morarji Desai Residential School (BC)	48	Malur, Kolar District	48 - 56
	Morarji Desai Residential School (ST)	144	Rajenahalli, Kolar District	57 - 62
	Kittur Rani Channamma Residential School (SC)		Rajenahalli, Malur Taluk, Kolar	63 - 66
9th November 2024	Dr. B. R. Ambedkar Residential School (SC)	735	Devarayapattana, #11 Cross, B. R. Complex, Devarayapattana 572104, Tumkuru	67 - 76
	Morarji Desai Residential School (SC)	86	Narasapura, Hebbur Hobli - 572120, Tumkuru Taluk, Tumkuru District	77 - 89
	Kittur Rani Chennamma Residential School (SC)	408	Hebburu Hobali - 572120, Kanakuppe Gram Panchayat, Tumkuru Taluk, Tumkuru District	90 - 94

Date	KREIS Institution Name	School code	Address	Page No.
16th November 2024	Kittur Rani Chennamma Residential School (ST)	669	Padma Mahadeva Krupa, 11th Cross, S.S Puram, Tumkur town, Tumkur - 572102	95 - 104
23rd November 2024	Morarji Desai Residential School (ST)	06	Kundana, Devanahalli taluk, Bangalore Rural - 562110	105 - 114
30th November 2024	Dr. B. R. Ambedkar Girls Residential School (SC)	710	Isturu - 561204, Madhure hobali, Doddaballapur taluk, Bengaluru Rural district	115 - 122
	Morarji Desai Residential School for Boys (BC)	01	Adakamaranahalli, Makali Post - 562162, Dasanapura Hobli, Bengaluru North Taluk, Bangalore Urban District	123 - 134
	Atal Bihari Vajapayee Residential School and PU College (SC)	591	Bommavara, Uganawadi post - 562110, Devanahalli (taluk), Bengaluru Rural (district)	135 - 147
7th December 2024	Kittur Rani Chennamma Residential School (SC)	661	Balepura, Chennarayapatna hobli, Devanahalli, Bangalore Rural District	148 - 158
	Kittur Rani Chennamma Residential School (SC)	387	Telagarahalli, Anekal, Bengaluru South District	159 - 169
14th December 2024	Morarji Desai Residential School (BC-12)	12	Dodda Alahalli, Kanakapura (T), Ramanagara (D) – 562117	170 - 186
	Morarji Desai Residential School (BC)	18	Byramangala(H. Gollahalli), Ramanagara(T) 562109, Ramanagara (D)	187 - 204
21st December 2024	Morarji Desai Residential School (SC)	03	Atthibele, Anekal, Bengaluru Urban - 562107	205 - 213
	Morarji Desai Residential School (ST)	17	Hunasedoddi, Kootagal Hobli, Ankanahalli (Post), Ramanagara Dt. - 562159	214 - 228
4th January 2025	Morarji Desai Residential School (SC)	20	Mayaganahalli, Mayaganahalli post, Ramanagara taluk 562128	229 - 246

Science Outreach Activities: Igniting Curiosity in Rural Schools

2024-2025

Introduction:

The Karnataka State Council for Science and Technology (KSCST) is committed to fostering a passion for science among the youth of Karnataka. One of our key initiatives is the **Science Outreach Program**, which aims to bring the importance of science and mathematics to rural schools and inspire the next generation of scientists.

Objectives:

- **Engage Students and Teachers:** Promote active participation in science-related activities.
- **Cultivate Inquiry:** Encourage students to ask questions, explore their curiosities, and participate effectively in scientific discussions.
- **Embrace Innovation:** Expose students to the latest advancements in science and technology.
- **Bridge the Gap:** Foster meaningful interactions between scientists and students.
- **Promote Scientific Thinking:** Encourage critical thinking and a deeper understanding of scientific concepts among high school students and teachers.
- **Inspire a Passion for Science:** Convince students of the intellectual value of science and cultivate a scientific mindset.
- **Empower Future Scientists:** Encourage students to pursue science in their higher education.

Science Outreach Programme for Rural Schools: A Collaborative Effort

- **Partnership for Impact:** KSCST, in collaboration with the **Science for Rural India (SFRI) initiative** – A group of research Scholars - students pursuing Ph.D., at the Indian Institute of Science (IISc), is conducting a comprehensive Science Outreach Programme for rural schools.
- **Reaching Underserved Communities:** A team of IISc research scholars, supported by the Department of Social Welfare, Government of Karnataka, visits rural schools, including:
 - Morarji Desai Residential School

- o Kittur Rani Chennamma Residential School
 - o Dr. B. R. Ambedkar Residential School
 - o Masti Venkatesha Iyengar Residential School
- **Empowering Students:** These institutions cater to high school students from underprivileged communities (SC/ST/BC). The outreach program aims to:
 - o **Ignite Curiosity:** Conduct engaging experiments and hands-on activities in Physics, Chemistry, and Biology, aligned with the 8th, 9th, and 10th-grade curriculum.
 - o **Build Confidence:** Instill a scientific temperament and motivate students to pursue science.
- **Investing in the Future:** KSCST provides financial support for the development of experimental kits to equip IISc research scholars for these activities and provide support for their travel in reaching schools.
- **Strategic Partnerships:** The schools were identified by the Karnataka Residential Educational Institutions Society (KREIS), functioning under the Department of Social Welfare, Government of Karnataka, from the districts of Ramanagara, Tumkur, Kolar, and Mandya.
- This programme is **supported and catalysed by National Council for Science and Technology Communication (NCSTC), Department of Science and Technology, Government of India.**



KARNATAKA STATE COUNCIL FOR SCIENCE AND TECHNOLOGY

Secretary: Prof. Ashok M. Raichur, Professor, Materials Engineering, IISc

Executive Secretary: Dr. U. T. Vijay

Karnataka State Council for Science and Technology (KSCST) an autonomous S&T organization under Department of Science & Technology, Government of Karnataka established in the year 1975 is one of the first State S&T Councils to be set up in the country. Education, Water, Energy, Housing, Geospatial Technologies, Natural Resource Management are some of the sectors identified by KSCST to pursue research, development and dissemination of ideas, products, services and technologies with the support of State and Central government. During the last 47 years of its existence, KSCST has been pro-actively engaging itself to identify, propose and implement S&T based solutions to locale specific needs / problems. In association with the Indian Institute of Science and several other premier R&D institutions, KSCST has been executing many projects and programs aimed at improving socio-economic conditions of the people of the state.



Over the years, a number of technologies have been translated from research and demonstration phase to the implementation and operational phase. KSCST provides support to the State Government in formulation of S&T based policies. Also supports Central and State Governments in scientific surveys, project implementation, evaluation, co-ordination & monitoring, organization of scientific meets and awareness campaigns.

MAJOR PROGRAMMES

- **Natural Resources Data Management System (NRDMS)** - A Repository of Natural Resources and Socio-economic geo-database to support local level planning. Developed guidelines for generating village cadaster using high resolution satellite imageries. First state to generate Geospatial Action Plan for line departments and use of Geospatial Technologies for Preparation of Action Plan made mandatory. Support to urban/rural local bodies in developmental planning for informed decision-making and support to COVID management. Developed webapps for several GIS applications.

- **Karnataka State Spatial Data Infrastructure (KSSDI):** KSSDI is a web portal to find and access spatial information/services via the Internet. Assisted in establishing National Data Registry.
- **Academic and Industry Interaction Cell (AIIC)** – Under Student Project Program (SPP), supporting and mentoring innovative under-graduate and post-graduate engineering student projects. Supported more than 16,800 projects so far. More than 100 projects commercialized. Established E-learning centers in government high schools to improve access to advanced educational resources, digital contents and lab experiments in the form of 3D animations using latest IT gadgets & internet. Support to faculty projects to develop innovative products & services. Science popularization / Communication / Teachers Enrichment programs; Science radio serial; National Science Day / National Mathematics Day
- **Rainwater Harvesting (RWH)** - End-to-end solution on RWH including awareness and technical support, implementation, preparation of DPR and support to enforcement. Has a patent on RWH and assisted state government in drafting RWH policy and guidelines Installations of more than 1.75 lakhs RWH structures for Institutions and Residence in Bangalore. Supporting urban local bodies in implementing RWH system in their buildings.
- **Digital Heritage** - Laser scanning of state archaeological sites and Hampi World Heritage site for creating virtual walk through and reconstruction/restoration. Mapping of all the state archaeological sites is in process.
- Geospatial mapping of **Traditional Surface Water Bodies** for restoration and rejuvenation. Mapped over 13,000 Traditional Surface Water Bodies across Karnataka, which includes Kalyani, Kunte, Gokatte and Katte. Based on the reports state government is taking up restoration works of surface water bodies under Jal Shakti Abhiyan and MGNREGA programs.
- **Energy Cell** – Demonstration and dissemination of new technologies, workshops, techno-economic feasibility reports and energy conservation & management including bio-energy. Providing detailed project reports to government institutions.
- **Housing** - Research, development & dissemination of energy efficient building technologies. Over 1 lakh houses built in India and over 20,000 houses built in Bengaluru using cost- effective energy efficient building technologies. Organizing training programs to engineers and architects.
- **Patent Information Centre** - Promotion, protection and commercialization of Intellectual Property Rights of inventors and creators. Established over 55 IP cells in engineering and degree colleges/institutions to encourage faculty, students, start-

ups and entrepreneurs. Supported filing more than 100 patents, designs, copyrights and trademarks.

- **State Awards for Scientists and Engineers** - Recognize and reward Scientific and Technological eminence in the state. Instituted by Government of Karnataka.
- **Established SC/ST cell** to promote adaptation of appropriate and relevant technologies for socioeconomic development of SC/ST and marginalized communities by assessing natural & human resource endowment, upgrading skills and creation of micro enterprises for sustainable livelihoods. Developed a tool to identify local specific training and skill building programs for improved livelihood and development of micro enterprises.
- **Establishing SHG/FPO enterprises** to address malnutrition, provide rural livelihoods and to reduce the fruit and vegetable spoilage and post-harvest losses because of lack of primary processing facilities by adopting fuel-efficient biomass dryers in Yadgir District of Karnataka. Envisaged to produce variety of nutrition products to address malnutrition specifically among children and women.

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ಕರ್ನಾಟಕ ವಸತಿ ಶಿಕ್ಷಣ ಸಂಸ್ಥೆಗಳ ಸಂಘ

(ಕರ್ನಾಟಕ ಸರ್ಕಾರದ ಅಂಗ ಸಂಸ್ಥೆ)

Government of Karnataka

Karnataka Residential Educational Institutions Society

(An Organisation of Govt. of Karnataka)

KREIS/EDN/OTH/9/2024-EDU- 96081

ದಿನಾಂಕ: 04/09/2024

ಸುತ್ತೋಲೆ

ವಿಷಯ: ಕರ್ನಾಟಕ ರಾಜ್ಯ ವಿಜ್ಞಾನ ಮತ್ತು ತಂತ್ರಜ್ಞಾನ ಮಂಡಳಿಯ ವತಿಯಿಂದ ಕ್ರೈಸ್ ಅಧೀನದ ವಸತಿ ಶಾಲೆಗಳಲ್ಲಿ ವಿಜ್ಞಾನ ಸಂಬಂಧಿತ ಪರೈತರ ಚಟುವಟಿಕೆಗಳನ್ನು ಹಮ್ಮಿಕೊಳ್ಳುವ ಕುರಿತು.

ಉಲ್ಲೇಖ: ಡಾ. ಯು.ಟಿ.ವಿಜಯ್ ರವರ ಪತ್ರ ಸಂಖ್ಯೆ: 6.1.08/ಎನ್.ಎಸ್.ಡಿ-2023-24/257
ದಿನಾಂಕ: 27/08/2024

ಮೇಲ್ಕಂಡ ವಿಷಯಕ್ಕೆ ಸಂಬಂಧಿಸಿದಂತೆ ಕರ್ನಾಟಕ ರಾಜ್ಯ ವಿಜ್ಞಾನ ಮತ್ತು ತಂತ್ರಜ್ಞಾನ ಮಂಡಳಿಯು ಪ್ರೌಢಶಾಲಾ ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲಿ ವೈಜ್ಞಾನಿಕ ಮನೋಭಾವವನ್ನು ಹೆಚ್ಚಿಸಲು, ಗಣಿತ, ವಿಜ್ಞಾನ ಬೆಳವಣಿಗೆ ಬಗ್ಗೆ ಆಸಕ್ತಿ ಮೂಡಿಸುವ ನಿಟ್ಟಿನಲ್ಲಿ ಭಾರತೀಯ ವಿಜ್ಞಾನ ಸಂಶೋಧಕರ (IISc., Ph.D., Research Scholars) ಸಹಯೋಗದೊಂದಿಗೆ ವಿಜ್ಞಾನ ಸಂಬಂಧಿತ ಪರೈತರ ಚಟುವಟಿಕೆಗಳನ್ನು ಸೆಪ್ಟೆಂಬರ್ - ಡಿಸೆಂಬರ್ 2024ರ ಮಾಹೆಗಳಲ್ಲಿ ಎರಡನೇ ಮತ್ತು ನಾಲ್ಕನೇ ಶನಿವಾರದಂದು ಬೆಳಿಗ್ಗೆ 10.00ರಿಂದ 12.00ರವರೆಗೆ ಕ್ರೈಸ್ ಅಧೀನದಲ್ಲಿ ಬರುವ ಬೆಂಗಳೂರು ನಗರದಿಂದ ಸುಮಾರು 80 - 100ಕಿ.ಮೀ. ವ್ಯಾಪ್ತಿಯಲ್ಲಿ ಬರುವ 20 ಪ್ರೌಢಶಾಲೆಗಳಲ್ಲಿ ಆಯೋಜಿಸಲು ಉಲ್ಲೇಖಿತ ಪತ್ರದಲ್ಲಿ ಕೋರಿರುತ್ತಾರೆ. (ಪತ್ರವನ್ನು ಅನುಬಂಧಿಸಿದೆ.)

ಈ ಸಂಬಂಧ, ಈ ಕೆಳಕಂಡ ವಸತಿಶಾಲೆಗಳನ್ನು ಆಯ್ಕೆಮಾಡಲಾಗಿದೆ.

ಕ್ರಮ. ಸಂಖ್ಯೆ	ವಸತಿ ಶಾಲೆ ಹೆಸರು	ಪ್ರಾಂಶುಪಾಲರುಗಳ ಹೆಸರು ಮತ್ತು ಫೋನ್ ನಂ
1	MDRS(BC),MALUR - 48	VENKATESH -9743669283
2	MVIRS(BC),MASTI- 247	VENKATARAVANAPPA G N -9686402005
3	MDRS(ST),RAJENAHALL I- 144	VENKATARAVANAPPA G N -9686402005
4	KRCRS(SC),RAJENAHALLI -398	K V NAGARAJA -9880322844

ಕಂ.ಸಿ, ಎಂ.ಎಸ್.ಬಿ.-1, 6 ಮತ್ತು 7ನೇ ಮಹಡಿ, ಕಿಂಗ್ಸ್‌ಹಾಲ್ಮ್ ರಸ್ತೆ, ಬೆಂಗಳೂರು - 560052. ಯಾಂತ್ರಾಂಶ : 080-22283366, 22265755, 22204466, 22207722 ಟೆಲೆಫ್ಯಾಕ್ಸ್ : 080-22262288

#8, M.S.B.-1, 6th & 7th Floor, Cunningham Road, Bengaluru - 560052. Phone: 080-22283366, 22265755, 22204466, 22207722. Telefax: 080-22262288

Email : ed.kreis@ka.gov.in, Website: www.kreis.kar.nic.in

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ಕರ್ನಾಟಕ ವಸತಿ ಶಿಕ್ಷಣ ಸಂಸ್ಥೆಗಳ ಸಂಘ

Karnataka Residential Educational Institutions Society

ಮುಂದುವರಿದ ಹಾಳೆ

Continuation Sheet.....

5	DBRARS(SC),KORA- 735	KASTURI KUMARA -9916586369
6	MDRS(SC),HEBBURU - 86	VEERANNA S KARABANNAVAR-9986779693
7	KRCRS(SC),THIMMASANDRA- 408	ANEES FATIMA- 9880056870
8	KRCRS(ST),GULUR - 669	ANITHA H S-9591049218
9	MDRS(ST),KUNDANA DEVANAHALLI - 6	RESHMA NAIK-9902534050
10	DBRARS(G)(SC),MADHURE (GIRLS)-710	MANJULA EDIGARA-9980032046
11	ABVRS(SC),BOMMAVARA- 591	NAGARATHNAMMA P-8105526933
12	KRCRS(SC),CHANNARAYPATNA- 661	BASKAR BABU-9448227951
13	MDRS(GEN),CHAMARAJAPETE TOWN-2	JOYTHI N P-6360267064
14	MDRS(B)(BC),ADAKAMARANAHALLI - 1	SUBRAHMANYAM-8123328962
15	KRCRS(U)(SC),TELAGARAHALLI -387	RAMANNA-9113230925
16	MDRS(SC),ATTIBELE- 3	BHAGYA C R-7760187938
17	MDRS(BC),MULLAHALLI- 12	KIRAN C-7411441516
18	MDRS(BC),BYRAMANGALA (H GOLLAHALLI)- 18	RAJANNA T R-9535858888
19	MDRS(ST),HUNASEDODDI(DEVARASEGO WDANADODDI)- 17	HANUMAIAH-9900515173
20	MDRS(SC),MAYAGANAHALLI - 20	MAHESHA M-9535435735

ಸದರಿ ಕಾರ್ಯಕ್ರಮದ ಕುರಿತು ಸಹಕರಿಸಲು ಕ್ರೈಸ್ ವತಿಯಿಂದ ನೋಡಲ್ ಅಧಿಕಾರಿಯಾಗಿ ಶ್ರೀ.ಆರ್.ಡಿ , ಯೋಜನಾಧಿಕಾರಿಗಳು(ಶಿಕ್ಷಣ) ರವರನ್ನು ನೇಮಿಸಿದೆ. 8ನೇ, 9ನೇ ಮತ್ತು 10ನೇ ತರಗತಿಯ ವಿದ್ಯಾರ್ಥಿಗಳು ಶಾಲಾ ಶೈಕ್ಷಣಿಕ ಚಟುವಟಿಕೆಗಳಿಗೆ ತೊಂದರೆಯಾಗದಂತೆ , ಭಾರತೀಯ



/107416/2024

ಕರ್ನಾಟಕ ವಸತಿ ಶಿಕ್ಷಣ ಸಂಸ್ಥೆಗಳ ಸಂಘ

Karnataka Residential Educational Institutions Society

ಮುಂದುವರೆದ ಹಾಳೆ

Continuation Sheet.....

ವಿಜ್ಞಾನ ಸಂಶೋಧಕರು ನಿರ್ವಹಿಸುವ , ವಿಜ್ಞಾನ ಸಂಬಂಧಿತ ಪರೈತರ ಚಟುವಟಿಕೆಗಳಲ್ಲಿ ಭಾಗವಹಿಸಿ ಕಾರ್ಯಕ್ರಮದ ಸದುಪಯೋಗವನ್ನು ಪಡೆಯಲು ಈ ಮೂಲಕ ತಿಳಿಸಿದೆ.

ಕಾರ್ಯನಿರ್ವಾಹಕ ನಿರ್ದೇಶಕರು

ಪ್ರತಿಯನ್ನು:

ಡಾ. ಯು.ಟಿ.ವಿಜಯ್, ಕಾರ್ಯನಿರ್ವಾಹಕ ಕಾರ್ಯದರ್ಶಿಗಳು, ಕರ್ನಾಟಕ ರಾಜ್ಯ ವಿಜ್ಞಾನ ಮತ್ತು ತಂತ್ರಜ್ಞಾನ ಮಂಡಳಿ, ಬೆಂಗಳೂರು

ಮಾಹಿತಿಗಾಗಿ:

ಶ್ರೀ.ಆರ್.ಡಿ , ಯೋಜನಾಧಿಕಾರಿಗಳು(ಶಿಕ್ಷಣ), ಕ.ವ.ಶಿ.ಸ.ಸಂಘ, ಬೆಂಗಳೂರು.

ಅಗತ್ಯ ಕ್ರಮಕ್ಕಾಗಿ:

ಸಂಬಂಧಪಟ್ಟ ವಸತಿ ಶಾಲಾ ಪ್ರಾಂಶುಪಾಲರುಗಳಿಗೆ.

SFRI Physical Outreach Session 2024 Volunteers' details

The following students and research scholars of Indian Institute of Science, Bengaluru, participated in the Science Outreach activities from **September 2024 to January 2025** organized by Science for Rural India in collaboration with KSCST.

Volunteer's Name	Designation	Department
Yogesh Thapliyal	MTech	Mechanical Engineering
Rupika Singh Tomar	GEECI	Centre for Nanoscience and Engineering
Ashutosh Panchal	PhD	Materials Engineering
Renu Raman Sahu	PhD	Instrumentation and Applied Physics
Aravind Kumar Yelashetty	Post Doc	Instrumentation and Applied Physics
Priyanka Chinchanasoor	Project Associate II	RBCCPS
Sanjana Kiran Tikare	Intern	RBCCPS
Robin Baja	Int PhD	Physics
Nipun Jain	PhD	Materials Engineering
Atal Singh	Int PhD	Biological Sciences
Prince Singh	Int Phd	Microbiology and Cell Biology
Shalini Samal	Int PhD	Microbiology and Cell Biology
Sanshrey Keshri	Project Associate	UG Prog
Debabrata Bhattacharya	Post Doctoral Fellow	Physics
Radhika Varshney	PhD	Interdisciplinary Center for Water Research
Shrutee Jalan	PhD	Divecha centre for Climate Change
Archana Yadav	B Tech	UG Prog
krishna Vanjani	BS	UG Prog
Shruti Sharma	Int PhD	Biological Sciences
Siddesh Rege	PhD	Materials Engineering
Aryan Shukla	BS	UG Prog

Uday Kiran	PhD	Biological Sciences
Pranay Kumar	BS	UG Prog
Aritra Roy	PhD	Computational Data Sciences
Anand Solomon	MTech	
Krishna	BS	UG Prog
Prasanna	Mtech	AI-Computer Science and Automation
Vanshika Makol	Int PhD	Biological Sciences
Swapnadip Repal	Mtech	AI - Electronics and Communication Engineering
Rahul MV	Mtech	Robotics

List of available experimental kits and experiments/demonstrations:

S. no	Experiments/demonstrations name	Experimental kit/materials available
Physics		
1	Static electricity	Physics electricity kit equipped with wires, Batteries, LED bulbs, switches, multimeter, magnets, nails, iron fillings,
2	Electric circuits	
3	Heating effects of electricity	
4	Magnetic effects of electricity	
5	Making electromagnetic coil	
6	Conduction of electricity in liquids	
7	Ignition temperature	presentation
8	Extinguishing fire	Demonstration
9	Force	Demonstrations
10	Surface Tension	Water, nails, etc
11	Pressure exerted by liquids and gases	Atmospheric pressure, using water, card
12	History of transport (Motion and measurement of distances)	Presentation demonstration
13	Laws of Reflection via plane mirror and convex and concave lens	Mirror, convex, concave mirror, plane Lens, convex, concave lens, mirror/ lens holder, LED laser lights, glass slab, prism
14	Types of reflection	
15	Refraction through glass slab and prism	
16	Laws of refraction	
17	Rainbow formation	
Chemistry		
1	Matter in our surroundings - states of matter	Different forms of matter demonstrations
2	Separation of components of a mixture tyndal effect	Mixtures and their separation techniques Demonstrations using simple mixtures
3	Malleability and ductility of metals	Demonstrations of different malleable and ductile metals
4	pH indicator – natural and synthetic	Natural indicators like turmeric, red cabbage, and synthetic like litmus to be used to check pH of different solutions, confirmation using pH strips
5	Sea breeze and land breeze	Presentation
6	Temperature – types of thermometer	Demonstrations via presentation thermometers

Biology		
1	Human Anatomy	Model
2	Organ systems – Digestive system	Demonstration using charts
3	Organ systems – Respiratory system	
4	Organ systems – Circulatory system	
5	Organ systems – Excretory system	
6	Organ systems – Nervous system	
7	Asexual reproduction in plants	Demonstration using charts and live plant part demonstrations
8	Parts of a flower and sexual reproduction in plants	Flower demonstrations and explaining Parts of flower and sexual reproduction in plants
9	Pollination in plants	Demonstration via presentation/chart
10	Heredity and Evolution	Demonstration via presentation/chart
11	Plant cell/Animal cell visualization under microscope and slide preparation demonstration	Demonstrations using fixed prepared slides under compound microscope. Slide preparation demonstrations will be given wherever feasible
12	Plant tissue under microscope demonstration	
13	Animal tissue under microscope Demonstration	
14	Mitosis slides under microscope demonstration	
15	Types of pollen under microscope demonstration and pollen germination	
16	Brain structure and function	Model demonstrations
17	Heart structure and function	
18	Skeletal system	

COMPENDIUM ON SCIENCE OUTREACH ACTIVITIES CONDUCTED IN KREIS RESIDENTIAL INSTITUTIONS

2024 - 2025

A Collaborative Initiative of:

- 1) Karnataka State Council for Science and Technology (KSCST)
- 2) National Council for Science and Technology Communication (NCSTC),
Department of Science and Technology, Government of India
- 3) Karnataka Residential Educational Institutions Society (KREIS)
Department of Social Welfare, Government of Karnataka
- 4) Science for Rural India – IISc Ph.D. Scholars Group

List of institution's covered during SFRI physical outreach sessions from September 2024 to January 2025

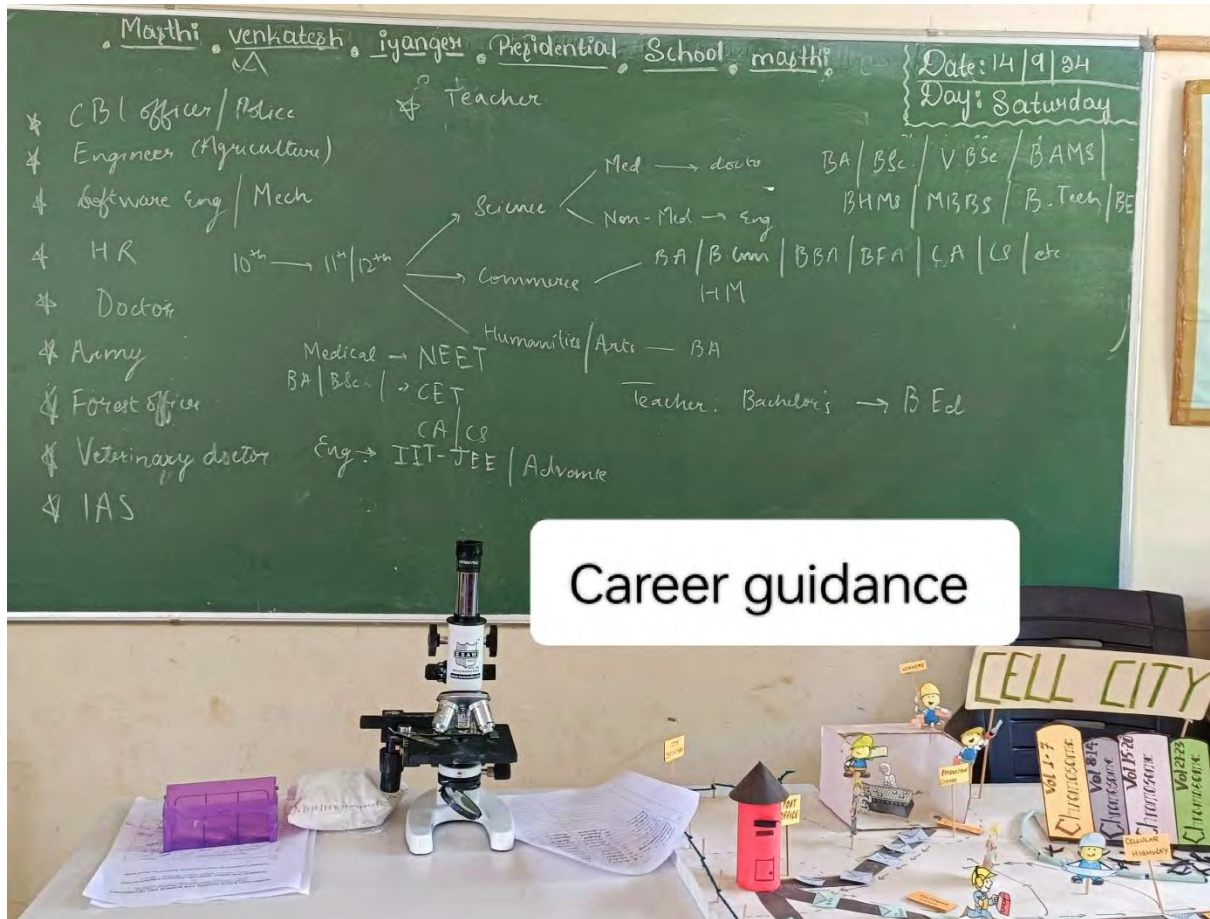
Date	KREIS Institution Name	School code	Address	No. of Students Benefitted
14th September 2024	Masti Venkatesha Iyengar Residential School (BC)	247	Masti - 5631295, Uladenahalli Post, Kolar District	83
	Morarji Desai Residential School (ST)	144	Rajenahalli, Kolar District	122
26th October 2024	Morarji Desai Residential School (BC)	48	Malur, Kolar District	60
	Morarji Desai Residential School (ST)	144	Rajenahalli, Kolar District	43
	Kittur Rani Channamma Residential School (SC)		Rajenahalli, Malur Taluk, Kolar	43
9th November 2024	Dr. B. R. Ambedkar Residential School (SC)	735	Devarayapattana, #11 Cross, B. R. Complex, Devarayapattana 572104, Tumkuru	129
	Morarji Desai Residential School (SC)	86	Narasapura, Hebbur Hobli - 572120, Tumkuru Taluk, Tumkuru District	112
	Kittur Rani Chennamma Residential School (SC)	408	Hebburu Hobali - 572120, Kanakuppe Gram Panchayat, Tumkuru Taluk, Tumkuru District	65

Date	KREIS Institution Name	School code	Address	No. of Students Benefitted
16th November 2024	Kittur Rani Chennamma Residential School (ST)	669	Padma Mahadeva Krupa, 11th Cross, S.S Puram, Tumkur town	72
23rd November 2024	Morarji Desai Residential School (ST)	06	Kundana, Devanahalli taluk, Bangalore Rural - 562110	134
30th November 2024	Dr. B. R. Ambedkar Girls Residential School (SC)	710	Isturu - 561204, Madhure hobali, Doddaballapur taluk, Bengaluru Rural district	67
	Morarji Desai Residential School for Boys (BC)	01	Adakamaranahalli, Makali Post - 562162, Dasanapura Hobli, Bengaluru North Taluk, Bangalore Urban	117
	Atal Bihari Vajpayee Residential School and PU College (SC)	591	Bommavara, Uganawadi post - 562110, Devanahalli (taluk), Bengaluru Rural	138
7th December 2024	Kittur Rani Chennamma Residential School (SC)	661	Balepura, Chennarayapatna hobli, Devanahalli, Bangalore Rural District	130
	Kittur Rani Chennamma Residential School (SC)	387	Telagarahalli, Anekal, Bengaluru South District	74
14th December 2024	Morarji Desai Residential School (BC-12)	12	Dodda Alahalli, Kanakapura (T), Ramanagara - 562117	137
	Morarji Desai Residential School (BC)	18	Byramangala(H. Gollahalli), Ramanagara(T) 562109, Ramanagara (D)	158
21st December 2024	Morarji Desai Residential School (SC)	03	Atthibele, Anekal, Bengaluru Urban - 562107	85
	Morarji Desai Residential School (ST)	17	Hunasedoddi, Kootagal Hobli, Ankanahalli (Post), Ramanagara Dt. - 562159	142
4th January 2025	Morarji Desai Residential School (SC)	20	Mayaganahalli, Mayaganahalli post, Ramanagara taluk 562128	121
Total Number of Students benefitted from 20 institutions				2032

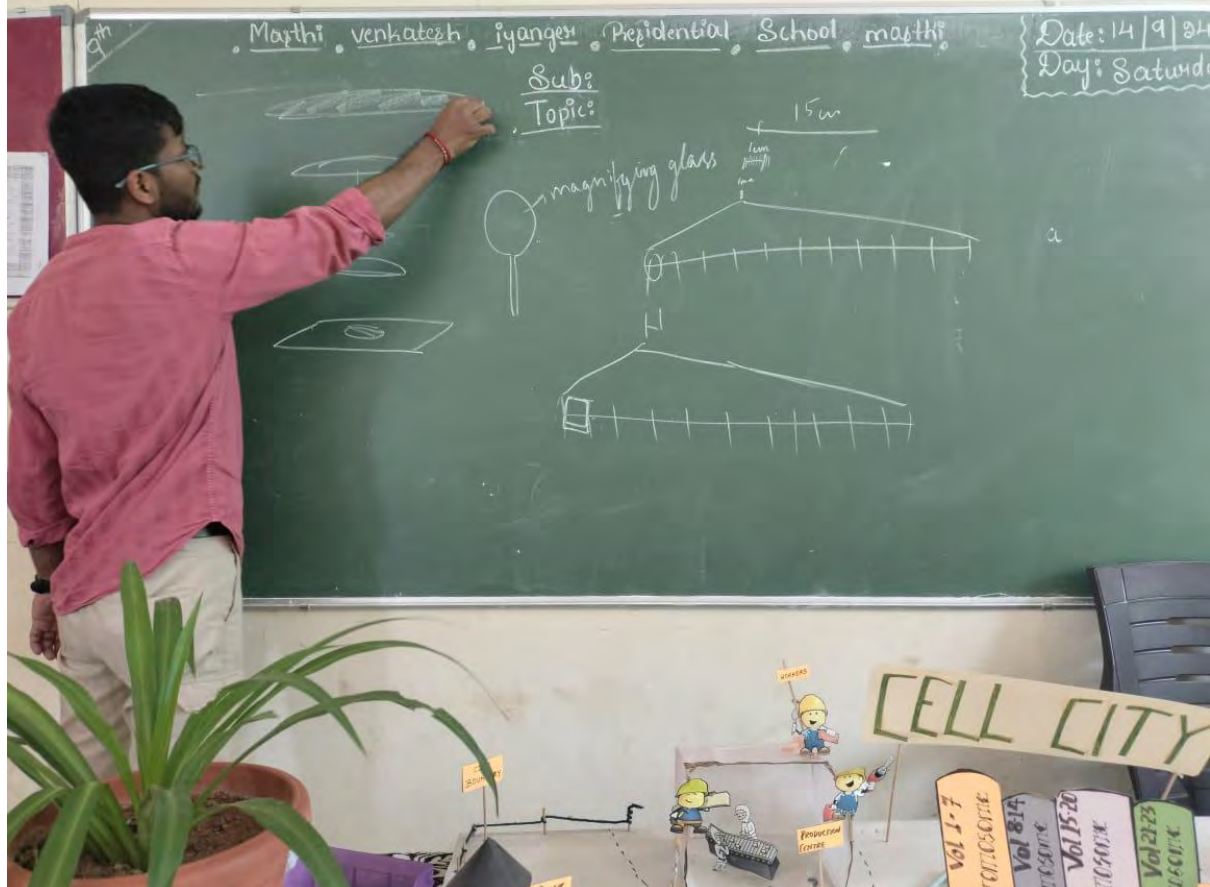
Outreach Report/ Feedback

School name	1. Masti Venkatesha Iyengar Residential School (BC) 2. Morarji Desai Residential School (ST)
School address and distance from IISc	1. School Code: 247, Address: Masti - 5631295, Uladenahalli Post, Kolar District. 2. School Code: 144, Address: Rajenahalli, Kolar District
Team members	1. Prince Singh 2. Shalini Samal 3. Amitava
Topics covered	1. Basics of microscopy and permanent slides of cells and tissues demonstration on a compound microscope. 2. Cell- structural and functional unit of life using a cell city model
Team members' feedback/experience*	Shalini Samal Students of 8th and 9th were taught about the basic fundamental and structural unit of life that is cell. They were taught using an analogy of cell as a city and was shown a cell city model. Students were enthusiastic and understood the concept. They know parts of cell and little bit about the functions of the cell. This suggests good classroom teaching by teachers. Students also were keen and curious to know more and how cell can behave as a city and all the doubts were cleared. Teachers were supportive and showed cordial and humble nature with the SFRI volunteers and helped us conduct our outreach session smoothly. As a part of learning assessment, a small game was played using the cell city model of QnA, wherein a chit was chosen by students which has a label for a cellular organelle. Students were asked to put the label on the model at correct place depending upon the cell city analogy and the organelle functioning. Most of the students were responsive. School infrastructure is good and can support good extra-curricular activities. Proper laboratories should be set up which will enhance the pedagogy and will aid the teachers in the teaching process. Lunch at the hostel was wholesome, consisted of rice, moong daal, rasam, and ragi mudde. The food was a balanced diet with apt spices etc. We suggest for more such visits. Prince Singh After the cell city model demonstrations and explanation about the functioning of cell, students of 8th to 10th classes were taught how a cell which is in micrometers can be visualized. Students were unaware of the history of cell visualization and neither they know

	anything about a basic compound microscope. First, a brief history of microscope development was taught to students and then I explained the basics of compound light microscope. All the parts of microscope and how a slide is made was taught. 10th class students were also taught light ray diagrams of how a specimen image is magnified 100 or more times by combination of lenses in the microscope. Students were highly enthusiastic and keen about learning about the microscope, and even more to see cells under it, Due to limitations of time, no slide preparation demo was given to the students. As a part of assessment students were asked to draw the cells image as observed under the microscope in their notebooks and label that the parts they can identify. Later on 10th class students were given a career guidance session. Students were asked about their future aspirations and then told what to pursue ahead to achieve those aspirations. A brief structure of various fields that they can join related to different streams after 10+2. They were also told about various national entrance exams and which courses they can pursue. Overall it was a great experience.
Date	14 th September 2024



Career guidance









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and

SCIENCE FOR RURAL INDIA (IISc Research Scholars Group)

Indian Institute of Science Campus, Bengaluru – 560 012

Outreach program for rural schools by Science for Rural India

Date: 14/09/24

Name of the School / Venue: *Maru Venkatesh Dyngam Residential School (MVRs)*

Sl. No.	Name of the Student Participant	Signature
1)	<i>Blashay, K. L 8th</i>	<i>[Signature]</i>
2)	<i>Thamun. L 8th</i>	<i>[Signature]</i>
3)	<i>Vaasu Kumar. M 8th</i>	<i>[Signature]</i>
4)	<i>Yashwanth. S 8th</i>	<i>[Signature]</i>
5)	<i>Gumanth. B 8th</i>	<i>[Signature]</i>
6)	<i>Deepak. S 9th</i>	<i>[Signature]</i>
7)	<i>Hareha. B. C 8th</i>	<i>[Signature]</i>
8)	<i>Akshay. S 8th</i>	<i>[Signature]</i>
9)	<i>yogesh. n 8th</i>	<i>[Signature]</i>
10)	<i>muradi. n 8th</i>	<i>[Signature]</i>
11)	<i>Hemadixi. 8th</i>	<i>[Signature]</i>
12)	<i>Laksh Kumar. R 8th</i>	<i>[Signature]</i>
13)	<i>Surendra. S. S 8th</i>	<i>[Signature]</i>
14)	<i>Vinanth P. S. S 8th</i>	<i>[Signature]</i>
15)	<i>Ramchandan. V. S 8th</i>	<i>[Signature]</i>

16)	Madhan Gowda.R.A	9th	Muf-n RA
17)	Ravi chandra.G.B	9th	Ravi
18)	mahesh.V	9th	Pruthi
19)	Sunil N.R	9th	Pruthi N.R
20)	Shashank Babu . M	9th	Shashank Babu . M
21)	Govardhan . A	9th	Govardhan
22)	Mounish . N	8th	Mounish
23)	manoj . V	8th	Manoj
24)	chokkan gowda . C.V		Chokkan
25)	Jashwanthreddy . V		Jashwanth
26)	Akhil . N		Akhil
27)	Chethan . R		Chethan . R
28)	Pruthvikumar.V		Pruthi . V
29)	JASHWANTH . R		Jashwanth
30)	Govardhan . M.D	9th	Govardhan . M.D
31)	Somasthekar . K.T	8th	Somasthekar
32)	Chetan . K	8th	Chetan
33)	Jashwanth . K . V	8th	Jashwanth
34)	Narain Kumar . A	8th	Narain
35)	Akshay . K.V	8th	Akshay
36)	Abhishek . R	8th	Abhishek . R
37)	Bhanath	8th	Bhanath
38)	Madan		Madan
39)	Ganesh babu .	9th	Ganesh
40)	VISHNO . N	9th	Vishno
41)			

42)	Deeksha R	Deeksha R
43)	Dhanupri. G.N	Dhanupri. G.N
44)	Bhangavi. J	Bhangavi. J
45)	Deeksha. K	Deeksha. K
46)	Likitha. T	Likitha. T
47)	Chandana. V	Chandana. V
48)	Vanshini. B. S	Vanshini. B. S
49)	Ganashree. S	Ganashree. S
50)	Pramitha. M. V	Pramitha. M. V
51)	LAKSHMI. S	Lakshmi. S
52)	Deeksha. N	Deeksha. N
53)	Vaishnavi. V	Vaishnavi. V
54)	Lauanya. Bai. D	Lauanya. Bai. D
55)	Merisha. S	Merisha. S
56)	Deeksha. T. V	Deeksha. T. V
57)	Yashodha	Yashodha
58)	Tharuja. D	Tharuja. D
59)	MONGAMMA. N	Mongamma. N
60)	Imchakra. A	Imchakra. A
61)	Gagan. Gauda. M	Gagan. Gauda. M
62)	Nehith. D. B	Nehith. D. B
63)	Shravanth. V	Shravanth. V
64)	B. M. DHANUPRI	B. M. Dhanupri
65)	Vipshuburya. R. M	Vipshuburya. R. M
66)	Kishor. D. V	Kishor. D. V
67)	Purish. Gauda. S	Purish. S

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and

SCIENCE FOR RURAL INDIA (IISc Research Scholars Group)

Indian Institute of Science Campus, Bengaluru – 560 012

Outreach program for rural schools by Science for Rural India

Date: 16/9/24

Name of the School / Venue: MVIRI + MDRS

Sl. No.	Name of the Student Participant	Signature
1)	Kallegh E.H 10 th	Kallegh E.H
2)	Akshay Gowda. A 10 th	Akshay. A
3)	Kishan Gowda. M.M 10 th	Kishan. M.M
4)	Vinay. C 10 th	Vinay. C
5)	Harshavardhan. S. 10 th	Harshu. S.
6)	Akash. H.A 10 th	Akash
7)	N. Vamsi Krishna 10 th	Vamsi. N
8)	Ambrish. G 10 th Std	Ambrish. G
9)	Tharun. M 10 th	Tharun. M
10)	Ganesh. V 10 th	Ganesh. V
11)	GUNAVARMA. K. R 10 th	Ganesh. V
12)	Ragavendra. S 10 th	Raghu. S
13)	Anish B. S 10 th	Anish. B.S.
14)	Nithin. G. R 10 th	Nithin. G. R
15)	Tulsi Ram. M 10 th	Tulsi. M

16)	yogesh.R 10th	y/vsh R
17)	NIRANJAN.B.N 10th	Niranjana.B.N
18)	Tejas.V 10th	J.S. m
19)	skhananth.A	skhananth.A
20)	Pratwal.h 10th	Pratwal.h
21)	THARUN TEJ. N 10th	Tharun Tej. N
22)	Madan R. 10th	Madan.R
23)	yashwanthkumar.R.T 10th	yashwanthkumar.R.T
24)	Shuangoudo. B	Shuangoudo. B
25)	Dayshan.V 10th	Dayshan.V
26)	Marjunadha E.C	Marjunadha E.C
27)	Ranjith. m	Ranjith. m
28)	Prashan.m 10th.	Prashan.m
29)		
30)		
31)		
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40)		
41)		

01	Uchitha .V	10 TH STD	Uchitha .V
	Indushree .K	10 th standard	Indu .K
	Malleghwari N.M	10 th Standard	Maw .
	Jyothi .Bageppa Gongi	10 th Standard	Jyothi .B.G.
	Bhoomika .K.M	10 th Standard	Bhoomi .K.M
	Rukmini .J	10 th Standard	Rukmini .J
	Kavya Shree .D	10 th standard	Kavya Shree .D
	Shreha .B	10 th Standard	Shreha .B
	Sukanya .T.V	10 th Standard	Sukanya .T.V
	chandana .B	10 th standard	chandana .B
	Sindhu .R	10 th Standard	Sindhu .R
	manasa .L	10 th Standard	Manasa .L
	Anusha .N	10 th Standard	Anusha .N
	KAVAN KUMAR . 10 th		Kavya .D
	Kavindra	10 th standard	Kavindra

Outreach Report/ Feedback

School name	Morarji Desai Residential School
School address and distance from IISc	Rajenahalli (pin code: 563137), Rajenahalli, Malur Kolar, Karnataka
Team members	1. Anand Solomon K 2. Krishna
Topics covered	1. Pressure exerted by liquids and gases. 2. Basics of light, Refraction of light (Glass slab , water)
Team members' feedback/experience*	<u>Anand Solomon K</u> - Students' response: Students followed the class. Language was not a big problem. They were comfortable in English. Some students are fluent in English but some of them are not. As far as science is concerned, they were very eager to see the experimental models and understand the science behind them. They were quite responsive. - Students' behavior: Very well-mannered and respectful towards their teachers and to us. It was a pleasure teaching them. - Teachers: Concerned about the students, and aware of the limitations and strengths of the students. They also attended the demonstration sessions. The principal of the school and all other staff welcomed us wholeheartedly. - Infrastructure: Very good Infrastructure. Morarji Desai Residential School and Masti Venkatesha Iyengar Residential school are operating at same campus. Desks, Benches and Boards are well maintained. - The school accommodates children from 6th standard to 10th standard. Students came from the rural parts of the district. After 10th standard for getting into government schools requires more than 90% percent marks. Other students depend on private schools for their higher studies. - The logistics and impact: It was an impeccably managed trip by the Karnataka Govt., and it is an excellent initiative from their end to foster interest in science among students. Sending scholars from eminent science institutions such as IISc, also sparks interest about such organizations among students and inspires them. - Logistically, the Govt did an excellent job of arranging for transportation by cab. The reimbursement for meals is much appreciated. The cab driver was very helpful and friendly. - Midday meal facility: Nutritious and healthy food, such as ragi balls, sambhar and rice are served to children. It was well cooked.

	Our experience: Amazing. We are truly grateful for providing us this opportunity of interacting with children and learning about education in rural Karnataka. Teachers and students are excited about our visit. They eagerly asked their doubts during the interaction. They know the basic concepts of force, pressure, atmospheric pressure, etc.. Students correlates the concepts with their daily life situations. Room for improvement: • Students are not very much aware about the career opportunities available to them. Also they are not aware about the competitive entrance examinations also. There should be a proper awareness campaign about the various career opportunities. • Teachers should not adopt bad disciplinary measures such as beating. Training should be given to teachers in good disciplinary measures. • Regular visits to the same schools with more volunteers will make more impact. Continuous monitoring of schools and students for their improvement Krishna Experiment related to optics were taught to children of classes 8th to 10th. Laws of refraction using lenses and glass slab were demonstrated along with a brief background and theory related to the demonstration. Students were individually shown the path of light using laser pointer passing through spherical lenses and glass slab and refraction of light was explained. Students were comfortable in English and were able to understand the concept. Subject acquisition was tested in form your interaction with students related to the lesson when asked orally or line diagrams were drawn by students as a part of learning. Students were slightly versed with the theory suggesting goof classroom teaching by their science teachers. Just more experimental demonstrations in the school will enable students to grasp the concept more and thus may bring curiosity in them to pursue science in their careers ahead.
Date	14 th September 2024





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Outreach program for rural schools by Science for Rural India

Date: 16/9/24

Name of the School / Venue: MDRS mowji Kusai Residential
school

Sl. No.	Name of the Student Participant	Signature
1)	Somashekhar M	Somashekhar M
2)	Santhosh Kumar S.C	Santhosh S.C
3)	Shruthi B.K	Shruthi B.K
4)	Tharun R.C	Tharun R.C
5)	Chethan V	Chethan V
6)	Pritham D.G	Pritham D.G
7)	Nagachethan S.	Nagachethan S.
8)	Poorna Chandra T.G	Poorna Chandra T.G
9)	R. Kupendra Setty	R. Kupendra Setty
10)	Bharath B	Bharath B
11)	Shan PRASAD M	Shan PRASAD M
12)	Nathan Kumar R	Nathan Kumar R
13)	Pradeep H.H	Pradeep H.H
14)	Ashok S	Ashok S
15)	SAKSHITHA GOWDA . S	SAKSHITHA GOWDA . S

16)	Naranith Gauda. K.	Ramesh. K.
17)	Kishan Gauda	Kishan Gauda
18)	Mithun Gauda. H.M	Mithun. H.M
19)	Nani. N	Nani. N
20)	Shashank. D.N	Shashank. D.N
21)	Narendra. D.K	Narendra. D.K
22)	Gopi Chandan. T.A	Gopi Chandan. T.A
23)	Keerthan Gauda. G.M	Keerthan Gauda. G.M
24)	Deethi. K.1	Deethi. K.1
25)	Gwalasagar. A	Gwalasagar. A
26)	DHANANTAY. R	Dhanantay. R
27)	Pavan Kumar. N	Pavan. N
28)	Chandan. B	Chandan. B
29)	Nithin Yadav. N	Nithin Yadav. N
30)	Manoj- Gowda. K	Manoj Gowda. K
31)	Tejas Gowda. P.N	Tejas Gowda. P.N
32)	Saijany. Gowda. R.	Saijany. Gowda. R.
33)	Charan Kumar. K	Charan Kumar. K
34)	Hemant. N	Hemant. N
35)	Murali. S	Murali. S
36)	Gowtham. R	Gowtham. R
37)	SHANKAR. K. Z	Shankar. K. Z
38)	MOHAN. M	Mohan. M
39)	SPINIVAS. C. G	Spinivas. C. G
40)	CHEETHAN. M	Chethan. M
41)	Kiran. T. H	Kiran. T. H

42)	Dhanush . m	Dhanush . m
43)	Bramod . s	<u>Bramod . s</u>
44)	Vaishanth Vishnu . M	Kue
45)	Abhaya Kuman . M	Blufi
46)	Manohar . P	Manohar . P
47)	Hari shawardhan . H . R	Hari shawardhan . H . R
48)	rajhan oroda . T	rajhan .
49)	Hansha Nayak .	Hansha Nayak .
50)	Kishor . G	Kishor . G
51)	Yashwanth . n	Yashwanth . n
52)	Prathap . D . V	Prathap . D . V
53)	Prathap . D . V	Prathap . D . V
54)	Punith gouda . K	Punith gouda . K
55)	Prithu . P	Prithu . P
56)	Prithu . P	Prithu . P
57)	Prithu . P	Prithu . P
58)	Shreya . B	Shreya . B
59)	Bhavya . K . M	Bhavya . K . M
60)	Sindhu . T . L	Sindhu . T . L
61)	Bhavya . S . B	Bhavya . S . B
62)	Kuduma . G	Kuduma . G
63)	Divya . OM	Divya . OM
64)	Hareeshitha . B . M	Hareeshitha . B . M
65)	Chahana . RN	Chahana . RN
66)	Daksha . P	Daksha . P
67)	Chaitanya . P	Chaitanya . P

1	NARENDRA A. V. G.	Narend
2	Pradeepan . N	Pradeepan . N
3	Divakar Reddy . R	Divakar Reddy . R
4	Keeerthan . J	Keeerthan . J
5	Kishan . m	Kishan . m
6	Chowam K. S	Chowam K. S
7	Pruthwish . m	Pruthwish . m
8	Tejas KUMAR REDDY . M	Tejas kumar Reddy . M
9	KISHOR KUMAR . K	Kishor kumar . K
10	Hemant . P	Hemant . P
11	Chaitan Tej . K. R	Chaitan Tej . K. R
12	Yashika H. P	Yashika H. P
13	INESH . L. m	Inesh . L. m
14	Prabhu . A	Prabhu . A
15	Shakthay Nayak . H	Shakthay Nayak . H
16	Bhuvan .	Bhuvan .
17	Deenush . RA	Deenush . RA
18	Shrutarth . R	Shrutarth . R
19	Akash . K. B	Akash . K. B
20	Tharun Kumar K. R	Tharun Kumar K. R
21	Munugesu . M. R	Munugesu . M. R
22	Pradeep . D. N	Pradeep . D. N
23	Venkatesh . P	Venkatesh . P
24	Pradeep . K. A	Pradeep . K. A
25	Tejas	Tejas
26	Roopesh KUMAR . S	Roopesh . S



Outreach Report/ Feedback

School name	Morarji Desai Residential School (BC)
School address and distance from IISc	School Code 48, Malur, Kolar District, 50 km
Team members	1. Robin Bajaj 2. Atal Singh 3. Prasanna
Topics covered	1. Basics of light, Refraction of light (Glass slab , water) 2. Basics of Microscopy: Slides Demonstrations
Team members' feedback/experience*	✓ <u>Robin Bajaj</u> Topics covered: I started with showing the simple demonstration for light travels in straight line. We needed the smoke or some media like that to pass a laser through that. Miss Padma provided incense stick for that. She was very helpful teacher. We demonstrated the refraction using the glass slab and pencil in water. Students response: students were very enthusiastic and eager to see the demonstrations. They understood the basics very well. And students were very smart and responsive. They could understand the English very well. But if we said something more technical. Miss Padma also helped by translating it to Kannada. Hosting: School hosted us very well. It was a great experience talking to principal and teachers during lunch. Logistics were arranged very well. My experience: Seeing this much enthusiasm in the school kids from rural area was truly impressive. These kids are just waiting for good opportunities. And I as a volunteer of SFRI will make sure that I take part in these sessions frequently. ✓ <u>Atal Singh</u> During the outreach program of SFRI. I Atal Singh, Integrated PhD, Biological Sciences conducted an educational session at a rural school, focusing on the fundamentals of microscopy. My aim was to introduce students to the fascinating world of microscopic science. The lecture covered the basics of how microscopes work, explaining key components and their functions to make the concept accessible for the students. In the lecture I

	introduced them with three types of microscopes namely Simple Microscope, Compound Microscope and Electron Microscope. The lecture began with an explanation of the microscope's structure, detailing essential components like the lenses, light source, and focusing knobs. You discussed how each part functions, illustrating how a microscope magnifies tiny objects to make them visible to the human eye. During the demonstration, I gave students hands-on experience, allowing them to observe microscopic specimens. As students took turns using the microscope, they observed various samples, which included Red blood cells and protists amoeba, giving them an exciting glimpse into a normally unseen world. This practical approach likely enhanced their understanding and sparked curiosity, making complex scientific ideas more approachable. My visit provided valuable exposure to microscopy, encouraging interest in science among the students. My lecture highlights the power of science in understanding the natural world. In the end I also add career guidance session and Q&A session. I was really happy to see the excitement on their faces after learning something new. They enjoy the lecture so much that the students asked when will I visit them again. They asked me questions about different topics in science and their curiosity to learn different things was unmatched. Thank you SFRI and KSCST for giving me this wonderful opportunity. ✓ <u>Prasanna</u> 1. Student followed well what what we were teaching them. They were attentive, curious. Student listened properly. They asked good questions. 2. I was teaching them how light travels. What happens when something come in the way of light. From there I introduce the idea of reflection and refraction. 3. Then we demonstrate couple of experiments for law of reflection, refraction. 4. Finally, i did a thought experiment to explain what physics is, what science is. Goal of thought experiment was to make them comfortable and connected with science. To illustrate science is something around us and not just the laws and principle in textbook. 5. Science teacher, principle and staff was very cooperative.
Date of visit	26 th October 2024, Saturday

















Outreach Report/ Feedback

School name	Morarji Desai Residential School (ST), School Code 144
School address and distance from IISc	Rajenahalli, Kolar District., Chikkaballapura district, Karnataka - 563139
Team members	1. Aritra Roy Choudhury 2. Ashutosh Panchal 3. Siddhesh Rege
Topics covered	1. Bernoulli's principle 2. Simple circuits and Ohm's law 3. Miscibility of liquids and Lava lamp
Team members' feedback/experience*	✓ <u>Aritra Roy Choudhury</u> • Students' response: The students were curious and excited to have us in their campus. The students asked us about us with great interest and were very well behaved and patient while listening to the sessions. • Students' behavior: The students were curious, well-behaved and disciplined. • Teachers: The teachers greeted us and offered us refreshments. The teachers were very supportive of us and monitored the progress of the sessions. The teachers also intervened whenever necessary to maintain decorum. • Infrastructure: This school was clean and well maintained. The classrooms were spacious and equipped with proper ventilation and lighting. There are open spaces and playground for the children to play. • The male female ratio: Among the students I found low number of girls compared to boys in classes 9 and 10. • The logistics and impact: The logistics was nicely coordinated and properly managed. The driver was will behaved and the car was well maintained. The outreach was very impactful for me personally as I was overwhelmed by the students' immense curiosity and the overall experience was very fulfilling. • I would like to thank Karnataka State Council for Science and Technology and SFRI for arranging the event. It was very well designed and coordinated. • Midday meal facility: We were offered to have food in the mess. We had ragi ball, sambar, rice and rasam. Weekly once they have chicken and egg twice. • Our experience: The experience was very fulfilling and enjoyable. The students' curiosity was very contagious and also made us more motivated for the cause. Overall, the experience was very rewarding. • Room for improvement: The mess menu can be altered a bit

	to include condiments like pickles and salads. And the amount of protein per meal can be increased. ✓ <u>Siddhesh Rege</u> • The school is accessible to rural children, and they have provided residence to students which is a great initiative for the children who have no access to school nearby. Students were very respectful, understanding, and disciplined. They have accepted us and behaved around us like them. behaved around their teachers and was very curious to know about what we were teaching them. The class was very engaging as they were very happy to see the teaching with live examples. I showed them the principle of a lava lamp and through that explained the concept of oil-water immiscibility and acid-base neutralization reactions. The students were very receptive and eager to learn. They were very enthusiastic to see the experiments working and showed so much interest. Therefore, I invited them to feel and learn it while doing it. • The school staff was really good. They showed us all the facilities and infrastructure available, and I was surprised to see that they have computer rooms. Also, we visited the mid-day meal canteen. There we have observed that they served very healthy and hygienic food to children and children eat well. The catering staff were also very well-mannered and took care of the children like their guardians. They have good sports grounds and basic equipment's available which you can see in some of our photos. So, it's good to see that the school staff takes care of all the children's wellbeing and their overall development. • Overall, it's good to see that children were having friendly learning environment. The school principal, vice principal, staff and teachers are helpful and friendly. The facilities provided in the school are modern and well maintained. It was a great experience to visit the school and interact with its students. ✓ <u>Ashutosh Panchal</u> • The school, although in a remote location, had plenty of students. Most of them are staying in the hostel. The overall infrastructure of the school looks good. Even though there was a parents-teacher meet running, the principal and teacher were hospitable to us. We interacted with 9th and 10th grade students. They were respectful, well-disciplined and inquisitive about the topics discussed. I was surprised to see the interest they showed during the demonstrations by
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	continuously asking questions and providing inputs based on their understanding. Since my demonstration involved making and understanding the working of circuits, the students were quick to relate the demonstration to day-to-day applications of electricity. I allowed them to help me make a circuit based on what was discussed earlier and they were able to follow as well as make a simple circuit. Upon asking what they were interested to do after their school education, a lot of students mentioned engineering, civil services and medical professions – implying that they are being counselled regarding future as well. After the demonstrations concluded and the students were supposed to head out for lunch, they maintained discipline in absence of a teacher/faculty member in their movement about the campus. • The students mentioned working with Microsoft office implying that they have functional computer facility as well. Although we didn't need it, we were offered projector room as well. • The midday meal was good and the staff hospitable. The facility was hygienic. They have large arrangements for the students to sit and eat comfortably. • Overall it was good experience interacting with the students and faculties. It is good to know that the students are
Date of visit	26 th October 2024









Outreach Report/ Feedback

School name	Kittur Rani Channamma Residential School (SC)
School address and distance from IISc	Rajenahalli, Malur Taluk, Kolar
Team members	1. Nipun Jain 2. Debabrata Bhattacharyya 3. Aryan Shukla
Topics covered	1. Introduction to polymers 2. Inertia and conservation of angular momentum 3. pH Indicators and an introduction to Acids Bases n Neutral Substances
Team members' feedback/experience*	Nipun Jain and Debabrata Bhattacharyya • Students' response: Students listened carefully and enthusiastically and followed the demonstrated experiments. • There was no language barrier and everyone was comfortable in speaking English. Some students were shy and did not responded much to topics discussed. All were very enthusiastic and were eager to see the experimental models. • Teachers: they welcomed us and immediately assigned and introduced us to students. They were also very keen to know what we are showing and if we can handle the class • Infrastructure: The school has basic facilities like a science experimental and computer lab. Though I don't know if the computers were working or not. Students were sitting on floor, thus, work benches needs to be introduced. Playing grounds were there, but I see no one interested in playing any sport. • The logistics and impact: The Karnataka Government organized the trip impeccably, making it an excellent initiative to foster students' interest in science. The reimbursement for meals is much appreciated. The cab driver came on time and showed no tantrums. • Midday meal facility: Food, sambhar, rice and buttermilk were served to children. Though it was cooked, but certain improvements are needed in rice quality. • Room for improvement: Computers needs to be checked if they are in working condition. Work desk and benches needs to be introduced for efficient seating. The science lab can be expanded for certain basic experiments. Training needs to be given for public speaking and overcoming stage fear. Sport activities should be promoted. •

	✓ <u>ARYAN SHUKLA</u> • Response to the class: They were comfortable in English. Although there were only a few of them who were comfortable to respond. • Student's Behaviour: They were well mannered n respectful towards me and my fellow member. • Teachers: The science teacher helped me with certain equipment that I required for the demonstration. They were helpful towards the students. • Infrastructure: Seemed good enough, had a Science lab, washrooms were clean. • Gender ratio: I went to a girl's school. The batch strength was good. • Meal facility: Sambhar was ok but rice didn't seem good. Overall food quality should be improved. • Our Experience: We are truly grateful for providing us this opportunity of interacting with children and learning about education in rural Karnataka. • The students were very keen to witness the colour change by adding turmeric and phenolphthalein to solutions. They did a few litmus paper tests themselves. • Room for improvement: Teachers can make science much more enjoying by making the students interact with them while teaching. Rather than the traditional lecture systems.
Date of visit	26 th October 2024







Outreach Report/ Feedback

School name	Dr. B. R. Ambedkar Residential School (SC), School Code 735
School address and distance from IISc	Devarayapattana, Tumkur district, Karnataka - 572104
Team members	1. Ashutosh Panchal 2. Prabhat Manna 3. Saya Sai Chandana
Topics covered	1. Simple circuits and Ohm's law 2. Electromagnet 3. Reflection and refraction of light
Team members' feedback/experience*	✓ <u>Ashutosh Panchal</u> • Students' response: We had two batches of students – seventh and eighth grade students in one and ninth and tenth in another. Seventh and eighth grade students were more interested in the demonstrations. They continuously engaged and asked questions related to the experiments. Their involvement was much better than their seniors. I do believe that students of tenth grade lacked interest in the topic which is relevant to them (Ohm's law). On another note, the students' aspirations for career after schooling and education are also commendable. Most of them were aware of the types of career options science has to offer. • Students' behavior: Overall the students were well-disciplined and quite curious about the demonstrations. • Teachers: The teachers greeted us and offered us refreshments. However, since it was lunchtime when we were done with the demonstrations most of the teachers had left. • Infrastructure: This school was clean and well maintained. The classrooms were spacious and equipped with proper ventilation and lighting. Although we didn't need it, we were offered a projector. We were also informed by the students that for their extracurricular activities they have carrom boards, chess boards and musical instruments. • The male female ratio: The ratio was almost 1.5:1. Decent strength in both demographics. • The logistics and impact: The logistics was well arranged. • Our experience: Overall, the experience was pretty good. • Room for improvement: We weren't able to see the lab facilities, but we were told by the students that they don't have science labs.

	✓ <u>Saya Sai Chandana</u> • The school is accessible to rural children, and they have provided residence to students which is a great initiative for the children who have no access to school nearby. Students were very respectful, understanding, and disciplined. The class was very engaging as they were very happy to see the teaching with live examples. Demonstrating optics concepts to the students was a very good and new experience for me, and I thoroughly enjoyed engaging with them. The seventh and eighth grade students' enthusiasm made the experience even more rewarding, while the overall positive atmosphere and engagement were quite memorable. • The school staff was good. While our experience is very positive, we could not access the lab facilities, as they do not have any science laboratory. ✓ <u>Prabhat Manna</u> • I like the students especially. They are curious about science and other activities. Students were very respectful, understanding, and disciplined. • I enjoyed it a lot.
Date of visit	9 th November 2024

Photos



KARNATAKA STATE COUNCIL FOR SCIENCE AND TECHNOLOGY

Indian Institute of Science Campus, Bengaluru – 560 012
Website: www.kscst.org.in || Email: office.kscst@iisc.ac.in || Tel: 080-2334 1652

and

SCIENCE FOR RURAL INDIA (IISc Research Scholars Group)

Indian Institute of Science Campus, Bengaluru – 560 012

Outreach program for rural schools by Science for Rural India

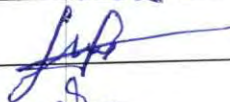
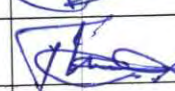
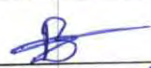
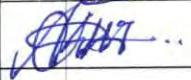
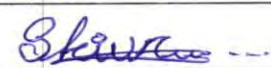
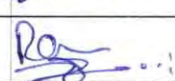
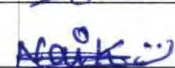
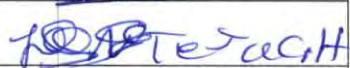
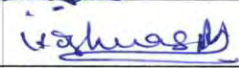
Date: 09/11/2024

Name of the School / Venue: Dr. B.R. Ambedkar Residential School,
Devarayapattana

Sl. No.	Name of the Student Participant	Signature
1)	Shobha H.K	Shobha H.K
2)	Nagajyoth.S	Nagajyoth.S
3)	Tharmay.	Tharmay.
4)	Manasa	Manasa
5)	Kavya T	Kavya T
6)	Pallavi	Pallavi
7)	Meenakshi	Meenakshi
8)	Monika	Monika
9)	Monika G.J	Monika G.J
10)	Chandana.M	Chandana.M
11)	Priyanka H.K	Priyanka H.K
12)	Archana H.B	Archana H.B
13)	Devika. G	Devika. G
14)	Shrawathi G.R	Shrawathi G.R
15)	Danamma N, Rampuri	Danamma N, Rampuri

16)	Bhalga	Bhalga
17)	lakshmi B.N	lakshmi B.N
18)	Rangalakshmi R	Rangalakshmi R
19)	chandana S.M	Sad
20)	Tejashwini A.M	ud
21)	Shalini	Shalini
22)	chailhanya	chailhanya
23)	Nanya	Nanya
24)	Kalavathi	Kalavathi
25)	Anjali.M	Anjali.M
26)	Kusuma.G	Kusuma.G
27)	yashaswini.M.H	yashaswini.M.H
28)	Hitaishree	Hitaishree
29)	Nanya Shree D.S.	Shree
30)	Vinutha.K	Vinutha.K
31)	Sinchana	Sinchana
32)	Anjali	Anjali
33)	Daxshan. P.R	P.R
34)	Chayan.N.S	Chayan
35)	Chayan V.S	Chayan.V.S
36)	chandanna J.N	chandanna J.N
37)	Jeevan A.N	Jeevan A.N
38)	Anil	Anil
39)	harinath. B.S	Harinath
40)	Harsha S.M	Harsha.
41)	Siddesh.S	Siddesh

42)	Saidhant N.	
43)	Maresh Babu	
44)	Jagan MOHAN Reddy P.V	
45)	Luhad. T. L	Luhad. T. L
46)	Charan M.G	Charan M.G
47)	MOHAN KUMAR	MOHAN
48)	Rithesh Gowda. J. S	
49)	Akhil. K. B	
50)	Jayam. C. A	Jayam. C. A
51)	CHANDANY Gowda.	
52)	Jay Deepak	Jaydeep
53)	Kanchesh. K	Kanchesh. K
54)	Pradeep	
55)	Harish	
56)	T. Charan Tej	Charan
57)	Ponish P. N	
58)	Guruprasad. N	
59)	Kushal. K. J	
60)	Yashwanth. L	
61)	Abhisek - A	
62)	Shivashankar. H. M	
63)	Vachan. B. H	
64)	Vasheerai. S.	
65)	Pawan	
66)	Kiran Kumar. P	
67)	Lokith Reddy H. B	

68	Gagan Kumar	
69	Suryan K.N	
70	Poojnal.S	
71	Ulas	
72	Harsha.P.R.	
78	Prathik Reddy m.H	
79	Amar.S	
80	Praveen	
71	Tharun.A	
72	Raghav S.N.	
73	Bharath.D.H	
74	Harshith m.J.	
75	Ajith H.P.	
76	Pranav M.D.	
77	Ananda Kumar	
78	Kuberan	
49	Harshith.	
80	Shivaprasad	
81	Ranjith	
82	Pavan.N	
83	Shrileksh Nair	
84	Tejash H	
85	Yashwanth	
86	Vishwas.M	
87	Lakshmi Kantaraj.R.	
88	Chethan Y.N	

89	yashwanth . N	Yash
90	Srujan . D.T	Srujan
91	Karunya Naik	Karunya
92	Lallesh . Kumar	Lallesh
93	Gyresh . Naik	Gyresh
94	Venkatesh	Venka
95	Akhil . V.A	Akhil
96	Balakrishna	Bala
97	LOKESH . H.B	LOKESH
98	Pramod Kumar	Pramod
99	Haysala . L.R	Haysala
100	Vishnu . V.A	Vishnu
101	Ravan L.N	Ravan
102	Goutham . S.R	Goutham
103	Darshan nayaka	Darshan
104	prashanth . T.N	prashanth
105	Prinya N	Prinya
106	Sumika	Sumika
107	Pavithra	Pavithra
108	Hemashree H.S	Hemashree
109	Vinu . L	Vinu
110	Hemalatha	Hemalatha
111	Rakshitha R	Rakshitha R
112	Nithyashree B.N	Nithyashree
113	Pranavika . M.P	Pranavika
114	Yashvee S.S.	Yashvee



Outreach Report/ Feedback

School name	Morarji Desai Residential School (SC), School Code: 86
School address and distance from IISc	Address: Narasapura, Hebbur Hobli - 572120, Tumkuru Taluk, Tumkuru District. (73 kms from IISc)
Team members	1. Renu Raman Sahu 2. Aritra Roy Choudhury
Topics covered	1. Types of Motion (Linear, Circular, Oscillatory), Velocity acceleration, 2. Pressure, Bernoulli's principle and its applications
Team members' feedback/experience*	• <u>Renu Raman Sahu</u> • Students' response: Students followed the class. Language was not a problem at all. They were comfortable in English, however, fluency in English is still an issue. As far as science is concerned, they were very curious to see the experimental models and understand the science behind it. They were quite responsive. • Students' behavior: Very well-mannered and respectful towards their teachers and to us. It was a pleasure teaching them. They were very disciplined as well. • Teachers: The principal of the school, teachers and all other staff welcomed us wholeheartedly. There is a lack of Science Teacher in the school. Only a single teacher was teaching Maths and Physics from class 6 to 10, and another teacher was teaching chemistry and biology from class 6 to 10. Atleast two more teachers are required for the school. • Infrastructure: The school had a spacious, well-ventilated classrooms, hostels and dinning hall. It also has a playground. • The male: female ratio among students, is almost equal. Female: Male faculty members ratio = 1:1, which is much appreciated. Physical training teacher and drawing teacher are included in the staff for much needed sports and recreational activities. There's also a playground. • The logistics and impact: It was a nicely managed trip by the Karnataka Govt., and it is an excellent initiative from their end to foster interest in science among students. Sending scholars from eminent science institutions such as IISc, also sparks interest about such organizations among students and inspires them. • Logistically, the Govt did an excellent job of arranging for transportation by cab. The reimbursement for meals is much appreciated. The cab driver was very helpful and friendly.

	• Midday meal facility: Nutritious and healthy food, such as ragi balls, dal, sambhar, rice and buttermilk are served to children. It was well cooked. • Our experience: Amazing. We are truly grateful for providing us this opportunity of interacting with children and learning about education in rural Karnataka. The excitement on a child's face on seeing demonstration types of motion was like a eureka moment for them. They also learned about the Bernouli theorem and tried the demonstration themselves. They were excited to know that the applications of these demonstrations in engines and airplances. The responses to physical equations in a chalk and board presentation are commendable. We wish these children the very best for their future. • Room for improvement: 1. Atleast two more teachers for science are required. 2. The classrooms can be converted to smart classes. 3. Infrastructure for other sports activities can be included (such as basketball, badminton etc.). • <u>Aritra Roy Choudhury</u> • Students' response: The students were very energetic and enthusiastic and were active in asking questions from both related and unrelated topics, ranging from evolution to black holes. I found that the students were able to properly understand what we were trying to convey in English. There are 229 students from class 6 to 10. • Students' behavior: The students were polite and well behaved with some rare minor innocent mischief. The students were curious about us and were asking about our native place what we had studied, what we are doing now and a lot more. Overall the students were very well behaved and carried themselves with discipline. • Teachers: The teachers were very respectful to us and were ready to provide any and all support they could provide to us. Principal sir was very supportive and also addressed the class by introducing us and towards the end of the session also delivered a concluding speech to sum up the objective of our visit in his own words. The teachers also intervened when we became a little overwhelmed by the students. Overall the teachers were very supportive.
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	• Infrastructure: The school infrastructure is very good the hallways and the classrooms are very spacious and well maintained. Though we were not able to visit the labs and hostels, overall the campus was well maintained and very clean. We were invited to have lunch in the mess which was also clean and well maintained. • The male and female ratio: The male and female ratio was almost equal to one. For the classes 8 to 10 we saw that there were almost equal number of boys and girls in the class. • The logistics and impact: It was a nicely managed trip by the Karnataka Govt., and it is an excellent initiative from their end to build up interest in science among students. Sending scholars from eminent science institutions such as IISc, also sparks interest about such organizations among students and inspires them. • Midday meal facility: The midday meal facility was alright, with a good division of carbohydrate, protein and fibers. • Our experience: Our experience was very good. We were overwhelmed by the response from the students. Some of the students were specially curious about a lot of different things. Overall it was a very positive experience. • Room for improvement: 1. There is shortage of teachers and one science teacher for the whole school which should be addressed with urgency. 2. The food can be a better with inclusion of healthy fats like ghee, butter and increase the amount of high quality protein. 3. Infrastructure for other sports activities can be included (such as table tennis, badminton etc.).
Date of visit	9th November 2024









KARNATAKA STATE COUNCIL FOR SCIENCE AND TECHNOLOGY

Indian Institute of Science Campus, Bengaluru – 560 012
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and

SCIENCE FOR RURAL INDIA (IISc Research Scholars Group)

Indian Institute of Science Campus, Bengaluru – 560 012

Outreach program for rural schools by Science for Rural India

Date: 9-11-2024

Name of the School / Venue: Moreaji Desai Residential School (SC)
School code : 86 ; Narasapura, Hebbur Hobli

Sl. No.	Name of the Student Participant	Signature
1)	Rekha. P 10 th standard	<u>Rekha. P</u>
2)	Usha 10 th standard	Usha
3)	Chethano K.T 10 th standard	<u>Chethano K.T.</u>
4)	Pavithra. 10 th standard	Pavithra.
5)	Chandu 10 th standard	Chandu
6)	Deeksha. V.R. 10 th standard	Deeksha. V.R.
7)	Drakshayini 10 th standard	Drakshayini..
8)	Rakeetha. G. S 10 th standard	Rakeetha G. S
9)	Nagorathna 10 th standard	Nagorathna
10)	Tejashwini P. H. 10 th standard	Tejashwini P. H.
11)	Sneha. B. R 10 th standard	Sneha. B. R
12)	Shanthi. T 10 th standard	Shanthi. T
13)	Aishwarya. B. 10 th standard	Aishwarya. B
14)	Swarna NR 10 th standard	Swarna NR
15)	Dhanushree. P 9 th standard	Dhanushree P

16)	Nandini 9 th Standard	Nandini
17)	Rashmi .B 9 th standard	Rashmi .B
18)	Shravani .S 9 th Standard	Shravani .
19)	Navya 9 th standard	Navya
20)	Kavanya .N 9 th Standard	Kavanya .N.
21)	Rashmi 9 th standard	Rashmi
22)	Hema .S 9 th Standard	Hema .S
23)	Kamala .H.I 9 th standard	Kamala .H.I
24)	Uma .L 8 th standard	uma .L
25)	Poonvitha H.V 9 th Standard	Poonvitha H.V
26)	Sinchana .S 9 th standard	Sinchana .S
27)	Ananya .P 8 th standard	Ananya .P.
28)	Monika .K 8 th Standard	Monika .K
29)	Lakshmi Bai 8 th Standard	Lakshmi Bai
30)	Jayalakshmi 8 th standard	Jayalakshmi
31)	Nayana .A 8 th Standard	Nayana .A
32)	Roopa .S. 8 th standard	Roopa .S.
33)	chindu 8 th standard	chindu
34)	Kusuma .K 8 th standard	Kusuma
35)	Bhoomika .H 8 th standard	Bhoomika .H.
36)	chetana .S 8 th standard	chetana .S
37)	Bhavya .R 8 th standard	Bhavya .R
38)	Veena .R.M 8 th Standard	Veena .R.M.
39)	Saravathi .V.G 8 th standard	Saravathi .V.G.
40)	Lekitha .K.N 8 th standard	Lekitha .K.N
41)	Bhoomika 8 th standard	Bhoomika

42)	Amrutha . R 8 th std.	Amrutha . R.
43)	Shravani. R 8 th std	Shravani. R
44)	Lakshmi . n/ 8 th std	Lakshmi
45)	Chandrika 8 th std	Chandrika.
46)	Haripriya 8 th std	Haripriya
47)	Rajendra G. 9 th std.	Rajendra G.
48)	Chethan. J 8 th std	Chethan. J
49)	Adithya 9 th std	Adithya
50)	Chikha Boregouda m. 9 th std	Chikha Boregouda m.
51)	Nikhil R. 9 th std	Nikhil R.
52)	Nikhil. C.S 9 th std	Nikhil. C.S
53)	Chinmay Gowda k 9 th std.	Chinmay Gowda k.
54)	Darshan. T.H 9 th std	Darshan. T.H
55)	Karthik. N 9 th std	Karthik. N
56)	Jyoti H.S 9 th std	Jyoti H.S
57)	Rishabh 9 th std.	Rishabh
58)	Gireesh HN 9 th std	Gireesh HN
59)	Chandra mouli naik 9 th std	Chandra mouli naik
60)	Breetham H. S 9 th std	Breetham H. S
61)	Keerthan. B.M 9 th std	Keerthan
62)	Varun P 9 th std	Varun P
63)	Shravan. D 9 th STD	Shravan. D
64)	Renuka Prasad 9 th STD	Renuka Prasad
65)	Mithun. R. Pedegar 9 th STD.	Mithun
66)	Rishi Kumar 9 th std	Rishi Kumar
67)	Gugunraj. M 9 th std	Gugunraj. M

Promod.m 9th std	RS
Nishi Vaarthan 9th std	Nishi Vaarthan 9th std
Dhanush R. 9th. S. t. d	DS
Lokesh A. C. R 9th Std	Lokesh C.R
Kushal : N.H 9th std	Kushal : N.H
Dharmesh B 8th std	DS
Manu. h. H 10th Standard	Manu. h. H
Aradhya B.K 10th standard	Aradhya B.K.
Shraddha Naik. b 10th Standard	Shraddha
Shraddha 10th std	Shraddha
Nithin M 10th standard	Nithin
<u>Adithya. m. B</u> 10th standard	<u>Adithya. m. B</u>
Aradhya	Aradhya
Chandan H. G 10th standard	chandan H. G
Praveen Naik. V 10th standard	Praveen
Naveen Kumar 10th standard	Naveen Kumar
Likitha B. K 10th standard	Likitha B.K
Mithra 10th standard	Mithra
Balaji 8th standard	Balaji
Nandan 8th standard	Nandan
Charan Kumar B.R. 8 std	Charan
Muthuraj. M. V 8th std	Muthuraj
Shraddha 10th std	Shraddha
Aradhya B. R 8th std	Aradhya
Likitha B. K 8th std	Likitha
Aradhya 8th	Aradhya

chetan somanna Alalageri 8th std

~~Chet~~

Chiranjeevi. K 8th std

Chiru.

Magesh. V.R. 8th S.T.D.

Magesh

Padmanobha. Pandith. 8th std.

Padu

yograj. u 8th std

Yograj

Dhameesh. B 8th std

Dhameesh. B

Somashekhar 8th std.

Somashekhar

Bhargava. K.R. 10th std

Bhargava. K.R.

Vishwas. H 8th std.

Vishwas. H.

Bhanu Prasada 8th S.T.D.

Bhanu prasada

Hemanth Kumar V. 8th S.T.D.

Hemanthkumar

Somashekhar. K

Somashekhar. K

Rohan. G. Kalli 10th std

Rohi-

Ajay Kumar. Ronad 10th std

Ajaykumar

Manu 10th Standard.

Manu

Lekhan. M 10th Standard

Lekhan. M

Srinivas Nayaka 10th STD

Srinivas Nayaka

Surya. V 10th STD

Surya

Udaya Prasad Reddy

Uday Reddy

Chetan. J

Chetan. J

Guru Prasad. H.V. 9th std

Guru. H.V.



Outreach Report/ Feedback

School name	Kittur Rani Chennamma Residential School (SC) – Thimmasandra, School Code: 408
School address and distance from IISc	Hebburu Hobali - 572120, Kanakuppe Gram Panchayat, Tumkuru Taluk, District - Tumkuru
Team members	1. Narayan Dutt Sharma 2. Radhika Varshney 3. G. Uday Kiran
Topics covered	1. Light – reflection, refraction and rainbow formation 2. Matter and Characteristics of Particles of Matter 3. Class – 8 th : Conservation of Animals and Plants 4. Class 9 th : What is Gravitation and formula of Gravitation 5. Class 10 th : Sexual reproduction in flowering plants
Team members' feedback/experience*	✓ <u>Narayan Dutt Sharma</u> - The school was an all-girls boarding school for classes 6-10, where we engaged with students from classes 8 through 10. - The topics covered included: basics of reflection, refraction (explaining light bending in different media), and an introduction to rainbow formation to stimulate curiosity about natural phenomena. Due to the room being too well-lit, we couldn't perform a hands-on demo of light splitting through a prism but provided appropriate video demonstrations instead. Newton's disk was demonstrated live, and we had a discussion on the conditions required for rainbow formation. - There was a noticeable language barrier, which affected engagement slightly. Participation from the 10th class was lower than expected, whereas the 8th class was actively involved and responded positively. The principal attributed this difference to post-pandemic (COVID-19) effects, possibly impacting students' confidence and interest. Overall, the students were very respectful and attentive. - Both the principal and the science teacher were friendly and supportive throughout the session. The (temporary) science teacher attended the demonstration with the 10th class and offered translations and additional explanations in Kannada, which helped make the concepts more accessible. - The principal provided valuable feedback on student engagement and academic strengths, noting the differences between class responses. She also mentioned that the school offers arts and computer programs (not directly observed during the visit) and that they have a lab equipped for similar science demos. - In terms of infrastructure, the classroom setting was modest but functional. The campus was green and well-maintained,

	though the dedicated sports area could benefit from further improvement to better support physical activities. Additionally, there appeared to be a water issue on the day of our visit, which may also need attention. ✓ <u>Radhika Varshney</u> • The school was an all-girls residential school for classes 6-10, and we interacted with classes 8, 9 and 10th. • The topics covered included: Matter, physical nature of matter, and characteristics of particles of matter. Activities were performed and demonstrated to understand that particles of matter have space between them, particles are very tiny, particles are continuously moving, concept of diffusion, and particles of matter attract each other. • In classes 8th and 9th, the students interacted very well and showed active interest for participation in the demonstrations. While the class 10th students looked shy and slightly under-confident. Almost all the students from classes 8-10th were able to understand English. However, still few students felt a need to understand topic in Kannada. The science teacher attended the demonstration with the 10th class and offered additional explanations in Kannada, which helped make the concepts more accessible. • The classrooms looked fair. The school was equipped with CCTV facility, which is important from the safety perspective. There is also a science lab present in the school. Both the principal and the science teacher were friendly and supportive throughout the session. The principal mentioned that school also offers arts, music and computer classes as well. The campus was green and well-maintained. • It appeared that handwash/soaps were missing from the washrooms, which may need attention to improve the hygiene of students. The overall experience of interacting with students was good. ✓ <u>G. Uday Kiran</u> • The moment I entered the campus, the aesthetic senses were high, which I attribute to the greenery over there. • The students were well-disciplined. I had the flash of my school life once I started interacting with them. • My approach was more to understand them. I do speak simple English; therefore, language was not at all a barrier to me. • I have explained to them something which they find difficulty with, rather than what I have prepared for.
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	• Though I didn't use many instruments to demonstrate the topics, I have tried questioning and interacting with them which made them like my approach. • Coming to Class 10th students, I tried to help them rather than by heart with a topic, how to remember it as a story and directed them how to answer any question in their board, in the context of biology. • I have tried to inculcate the art of reading textbooks and understand them.
Date of visit	9 th November 2024









Outreach Report/ Feedback

School name	Kittur Rani Chennamma Residential School
School address and distance from IISc	School Code 669, Padma Mahadeva Krupa, 11 th cross, Tumkur, 60 km
Team members	1. Robin Bajaj 2. Nipun Jain
Topics covered	1. Demonstration of ray diagrams using lens 2. Hydrogels
Team members' feedback/experience*	✓ <u>Robin Bajaj</u> It was a wonderful experience! Here's a summary of my report with the key points organized for clarity: Topics Covered: - Demonstrated ray diagrams using a diya and lenses, covering all cases through experiments. - Used incense cones to visualize the path of laser light, showcasing the focusing effect of two laser beams with a convex lens—a highlight for students. - Revisited experiments on refraction and encouraged students to replicate them individually. - Ensured that each student could participate actively by providing science kits from SFRI and an additional kit. Students' Response: - Students were highly enthusiastic and eager to learn from the demonstrations. - Displayed a solid understanding of basic concepts and actively engaged in the experiments. - Communicated well in English, though technical terms required assistance from the science teacher in Kannada. Hosting: - The school extended warm hospitality, with the principal and teachers being very welcoming. - Refreshments like juice were provided, adding a thoughtful touch to the experience. Personal Experience: - Witnessing the enthusiasm of rural students was inspiring. - Felt that these students are brimming with potential and just need the right opportunities to thrive. ✓ <u>Nipun Jain</u>

	Student Response: They were not very much comfortable in English but were very enthusiastic to respond and take part in discussion. All were eager to see the experimental models. • Teachers: The science and the english teacher helped in maintain the decorum and discipline. They were also helpful in translating from English to Kannda for effective communication to students • Infrastructure: The school has basic facilities and big halls. Students were sitting on floor, thus, work benches needs to be introduced. • Our Experience: We are truly grateful for providing us this opportunity of interacting with children and learning about education in rural Karnataka. • Room for improvement: Work desk and benches needs to be introduced for efficient seating. The science lab can be expanded for certain basic experiments. Training needs to be given for public speaking and overcoming stage fear. Sport activities should be promoted.
Date of visit	16 November 2024, Saturday



















Outreach Report/ Feedback

School name	Morarji Desai Residential School (ST), School Code 6
School address and distance from IISc	Kundana, Devanahalli Taluk, Bangalore Rural- 562110
Team members	1. Siddhesh Rege 2. Radhika Varshney 3. Debabrata Bhattacharyya
Topics covered	1. Working Principle of DC generator (Electromagnetic Induction) 2. States of Matter 3. Demonstration of conservation of linear and angular momentum
Team members' feedback/experience*	<u>Siddhesh Rege</u> • Students' response: The students were curious and excited to have us in their campus. The students were very well behaved and patient while listening to the sessions. • Students' behavior: The students were curious, well-behaved and disciplined. • Teachers: The teachers greeted us and offered us refreshments. The teachers were very supportive of us and monitored the progress of the sessions. The teachers also intervened whenever necessary to maintain decorum. • Infrastructure: This school was clean and well maintained. The classrooms were spacious and equipped with proper ventilation and lighting. The computer labs and the SMART lab in the facility was well equipped with basic science experiments. • The male female ratio: Among the students I found almost equal number of girls compared to boys in classes 9 and 10. • The logistics and impact: The logistics was nicely coordinated and properly managed. The driver was well behaved and the car was well maintained. The outreach was very impactful for me personally as I was overwhelmed by the students' immense curiosity and the overall experience was very fulfilling. • I would like to thank Karnataka State Council for Science and Technology and SFRI for arranging the event. It was very well designed and coordinated. • Our experience: The experience was very fulfilling and enjoyable. The students' curiosity was very contagious and also made us more motivated for the cause. Overall, the experience was very rewarding.

	<u>Radhika Varshney</u> • The school was a co-educational residential school for classes 6-10, and I interacted with classes 8, 9 and 10th. • The topics covered included: States of matter, and demonstrations/activities related to properties of states of matter such as compressibility, shape, volume, and tendency to flow. • In all the classes, the students interacted very well and showed active interest in participating in the activity. Almost all the students from classes 8-10th were able to understand and speak English. • The classrooms looked fair. The school was equipped with a CCTV facility, which is important from a safety perspective. There is also a STEM lab present in the school, alongside a computer lab with a good number of computers and a smart class. Both the principal and the science teacher were friendly and supportive throughout the session. • The school's infrastructure was decent and well-maintained, with well-ventilated classrooms. • The overall experience of interacting with students was good, and their response was positive as they were expecting more such outreach sessions from us. Debabrata Bhattacharyya The school administration seemed well organized in terms of logistics, setup. The classrooms were well maintained, including well above average lab facilities. (However, perhaps all tools and equipments were not utilised based on students' feedback) There were fair amount of open space in front of the school where the students engage in prayers and all that. The Headmistress and office stuff welcomed us very well and were cordial throughout. The students were curious, disciplined and well-mannered.
Date of visit	23 rd November 2024



KARNATAKA STATE COUNCIL FOR SCIENCE AND TECHNOLOGY

Indian Institute of Science Campus, Bengaluru – 560 012
Website: www.kscst.org.in || Email: office.kscst@iisc.ac.in || Tel: 080-2334 1652

and

SCIENCE FOR RURAL INDIA (IISc Research Scholars Group)

Indian Institute of Science Campus, Bengaluru – 560 012

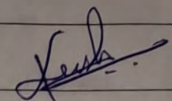
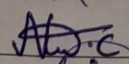
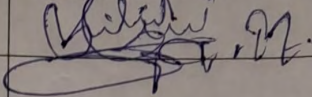
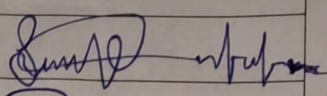
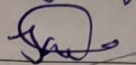
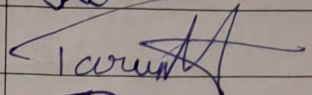
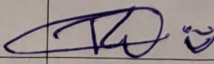
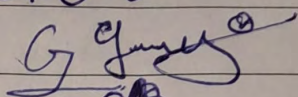
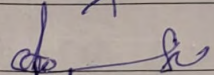
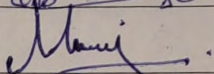
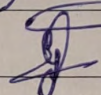
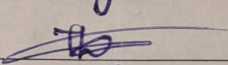
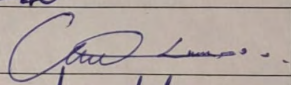
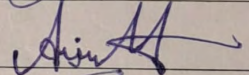
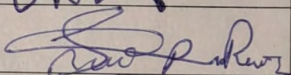
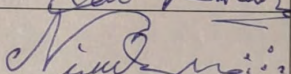
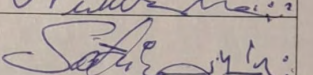
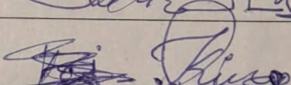
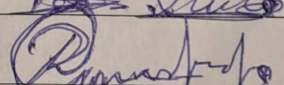
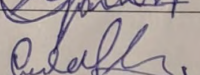
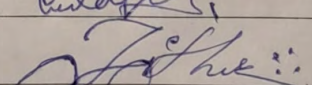
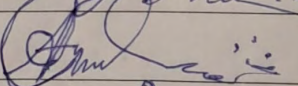
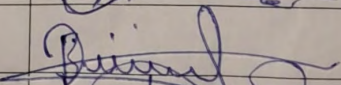
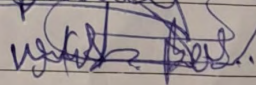
Outreach program for rural schools by Science for Rural India

Date: 23rd November, 2024

Name of the School / Venue: Moraji Desai Residential School (ST)
School code: 6. Address: Kundana, Devanahalli taluk,
Bangalore Rural - 562 110

Sl. No.	Name of the Student Participant	Signature
1)	Mulambika . Y. G	<u>Mulambika</u>
2)	Diphuwarya . S	<u>Diphu . S</u>
3)	Priyanka . R	<u>Priyanka . R</u>
4)	Sanjana . R	<u>Sanju .</u>
5)	Abhinaya . N	<u>Abhinaya . N</u>
6)	Navyashree . N.	<u>Navya . N.</u>
7)	Nischitha . R.	<u>Nischitha . R.</u>
8)	Kalyani . C. R.	<u>Kalyani . C. R.</u>
9)	Amrutha . M	<u>Amrutha . M</u>
10)	Lahari . A	<u>Lahari . A</u>
11)	Samridhhi	<u>Samridhhi</u>
12)	Sanjana . S. N.	<u>Sanju</u>
13)	Reethushree . R	<u>Reethushree R</u>
14)	Akshaya . . A	<u>Akshaya . A</u>
15)	Thaithanya . B. V	<u>Thanya</u>

16)	Inchana C.S	<u>Inchana</u>
17)	Chetham .M	<u>Chetham</u> .M
18)	MADAN .S	MADHAN .S
19)	Chidananda .P	<u>Chidananda</u>
20)	Arun, T, R	<u>Arun</u>
21)	Pootham .L	<u>Pootham</u>
22)	pruthvi Manas .N	<u>Pruthvi</u> Manas .N
23)	Sanjay Kumar .M	<u>Sanjay</u> .M
24)	Mithun .M	<u>Mithun</u> .M
25)	Abhishek .H.K	<u>Abhishek</u>
26)	Vikas .C.H	<u>Vikas</u>
27)	Hemant Kumar .M	Hemant Kumar .M
28)	Jayanth .V.S	JAYANTH .V.S
29)	Sanjath .G .Raju	<u>Sanjath</u> .G .Raju
30)	Manu .M .	manu .M
31)	Shilak .C	<u>Shilak</u> .C
32)	Dileep .N	<u>Dileep</u> .N
33)	Dhanush .M	<u>Dhanush</u> .M
34)	Vishwas .S .M	<u>Vishwas</u> .S .M
35)	Arunath .C	<u>Arunath</u>
36)	Mohith .M	<u>Mohith</u> .M
37)	Susmitha .L	<u>Susmitha</u> .L
38)	Bhuvith Gowda .M	<u>Bhuvith</u> .M
39)	Abhishek .S	<u>Abhishek</u>
40)	Lokesh .R	<u>Lokesh</u>
41)	Tharun .S	<u>Tharun</u>

42)	K.N. Kumbhar Gouda	
43)	NEERAJ.C	
44)	SHARAT.H.M	
45)		
46)	Suhag.V.	
47)	Vishan	
48)	S.g Tarun Kumar	
49)	Praful.v.	
50)	Gujar Gouda C.B	
51)	Sanjay.R	
52)	Chandan.M.	
53)	Manoj. Nayak.M.	
54)	Girish.T	
55)	Theerth c. s.	
56)	Chethan	
57)	Arun.S.	
58)	Sharana Basava	
59)	Nikhil.B.M.	
60)	Satish.	
61)	Koushik.S.M.	
62)	Rakesh.M.	
63)	Gurucharan.D	
64)	Likith.S.	
65)	Adarsh.P.	
66)	Bhuvan nayak.	
67)	Venkatesh.H.M.	

68)	Adithya . H. nalk	Adithya . H. nalk
69)	Nandan Yadav	Nandan Yadav
70)	Bharath nayak	Bharath A. M
71)	Sushanth . T. D.	Sushanth . T. D.
72)	Ajith . P.	Ajith . P.
73)	Nadikethan . C.S	Nadikethan . C.S
74)	Nithin	Nithin
75)	Gagana Shree . N	Gagana Shree . N
76)	Lakshmi . R	Lakshmi . R
77)	Dhanushree	Dhanushree
78)	Shreya . S	Shreya . S
79)	Tamara . A	Tamara . A
80)	Indu Shree . M	Indu Shree . M
81)	Chaitora . S	Chaitora . S
82)	Priyanka . A	Priyanka . A
83)	Krutika . M	Krutika . M
84)	Nithya . M	Nithya . M
85)	Durga Shree . C.R	Durga Shree . C.R
86)	Lekhana	Lekhana
87)	Mikhail Bowda @.M	Mikhail Bowda @.M
88)	VEERENDRA . G	VEERENDRA . G
89)	Anand . M	Anand . M
90)	Saujan . S.	Saujan . S.
91)	Gautham . M	Gautham . M
92)	Varun Gowda B	Varun Gowda B

93)	Chandan Kumar - b	Chand
94	chandan.M	Chand
95	S. S. K. I. K	S. S.
96	Shivaprasad. K. L	Shiv
97	Nikhil. R. S	Nikh
98	Charan: AM	Char
99	Chandana. B. V	Ch
100	Adithya. N.	Ad
101	Arijun A	Arij
102	Mangaj. M	Mang
103	Bhauith. C	Bhau
104	Mahesh. M. R	Mahesh
105	Harshith. P. G. code: R	Harsh
106	Seethith	Seethith
107	Kuma Sagar	Kuma
108	Jayanth Kumar	Jay
109	Niranjan. B. R	Nira
110	Poonikethan. B. N	Pooni
111	Shreshith. B. T	Shresh
112	Shobith T. L	Shobi
113	Sai Teja. S	Sai
114	Lashith. Apruda. R	Lash
115	Karun. B. A	Karun
116	Mithun. P	Mithun
117	Mithun Gowda N. M	Mith
118	Shreyas. M	Shrey



Outreach Report/ Feedback

School name	Dr. B.R Ambedkar Girls Residential School, School Code 710
School address and distance from IISc	Madhure, Doddaballapura, Bengaluru Rural - 561204
Team members	1. Ashutosh Panchal 2. Debabrata Bhattacharyya 3. Radhika Varshney 4. Shrutee Jalan
Topics covered	1. Construction of simple electromagnet 2. Angular momentum 3. Atoms and molecules using ball-and-stick model
Team members' feedback/experience*	✓ <u>Ashutosh Panchal</u> • Students' response: We had the opportunity to interact with students of 8th, 9th and 10th grade. They showed good interest in the demonstrations presented and were able to grasp the principles behind them quickly. The 10th grade students also showed concern regarding the upcoming board exams, indicating their seriousness about it. On interacting with them regarding future career options in science, it was evident that very few students actually knew the type of options available. They were briefed about the options available and the competitive exams required for such alternatives, which most of them noted. • Students' behavior: Overall the students were well-disciplined and quite curious about the demonstrations. • Infrastructure: This school was clean and well maintained. There's a playground next to the entry gate which is maintained properly. The classrooms were spacious and equipped with proper ventilation and lighting. There's a library where students are allowed to read books which are not related to their coursework. While discussing with the 10th grade students, we got to know that although they have a science lab, they don't have the tools to perform the coursework related experiments. They also mentioned having a computer lab where C-programming is taught. • The logistics and impact: The logistics was well arranged. • Our experience: Overall, the experience was pretty good. ✓ <u>Radhika Varshney</u> • The school was an all-girls residential school for classes 6-10, and I interacted with classes 8, 9 and 10th.

	• The topics covered included: atoms and molecules using ball and stick models. Models were demonstrated depicting atoms, molecules, and difference between molecules of elements and compounds. • In all classes, the students interacted very well and showed active interest in participation in the demonstrations. Almost all the students from classes 8-10th were able to understand and speak English. • The classrooms looked fair. The school was equipped with CCTV facility, which is important from the safety perspective. The infrastructure was good, school had facilities such as computer lab, Science lab, and library. The campus was well-maintained. • The overall experience of interacting with students was good. The logistics were well arranged. ✓ <u>Debabrata Bhattacharyya</u> ✓ <u>Shrutee Jalan</u> • This was a girls' residential high school. We demonstrated our experiment to class 10 students. We showed basic principles of conservation of linear and angular momentum through simple models. We used bicycle wheel to showcase angular momentum conservation. We also showed them precessional motion using bicycle wheel only. The students showed interest in understanding the principles behind those and took part in trying out the experiments themselves. • The students were well-mannered, well versed in English. We had interactions with them about their future goals as well. • The infrastructure was fine. School is well maintained in terms of cleanliness. There are lab and library facilities, however, students mentioned lack or absence of lab activities. • They have a Computer lab where they can learn C - programming language and each student gets 40 mins time to work on a computer. • The logistics were well organised. • Overall, good experience
Date of visit	30 th November 2024

Photos





KARNATAKA STATE COUNCIL FOR SCIENCE AND TECHNOLOGY

Indian Institute of Science Campus, Bengaluru – 560 012
Website: www.kscst.org.in || Email: office.kscst@iisc.ac.in || Tel: 080-2334 1652

and

SCIENCE FOR RURAL INDIA (IISc Research Scholars Group)

Indian Institute of Science Campus, Bengaluru – 560 012

Outreach program for rural schools by Science for Rural India

Date: 30/11/2024

Name of the School / Venue: D.R.B.R. Ambedkar Girls Residential School (Madhure) Ho
Doddaballapur.

Sl. No.	Name of the Student Participant	Signature
1)	Bindushree	Bindushree
2)	Sirisha. H. M	Sirisha.
3)	Deepika. M	Deepika. M
4)	Motisha. H	Motisha.
5)	Tanhai. V.	Tanhai. V.
6)	Deeksha. m. D	Deeksha. m. D
7)	Meghana. T. R.	Megha. T. R.
8)	Haripriya. G	Haripriya. G
9)	Chaitanya. G	Chaitanya. G
10)	Poornima. V	Poornima. V
11)	Inchara. N	Inchara
12)	Amrutha. V	Amrutha. M. V
13)	Dhanushree. M. D	Dhanushree
14)	Nisha. M	Nisha.
15)	Rohitha. S. M	Rohitha. S. M

42)	Vinutha	Vinutha
43)	Nikitha .M.N	N
44)	Ganavi.v	Ganavi.v
45)	Somya.M	Somya.M
46)	Mahalakshmi.C	Mahalakshmi.C
47)	Manvitha .B.M	Manvitha.B.M
48)	Yashodha .K.S	Yashodha.K.S
49)	Sinchona .M	Sinchona.M
50)	Amulya.k	Amulya.k
51)	Vaishnavi .U	Vaishnavi.U
52)	Prateeksha	Prateeksha
53)	Gayithri	A.M
54)	Brunda Shree K.M	B.K.M
55)	Hema.H	Hema.H
56)	Bhoomika.B.S	Bhoomi
57)	Manjushree	Manjushree
58)	Likitha.T.N	D..
59)	Geetha.C	Geetha.C
60)	Nayana .N	Nayana .N
61)	Shalini .M	Shalini .M
62)	Poorvika .K	Poorvika .K
63)	Hamsa.N	Hamsa.N
64)	Deekshidha.k	Deekshidha.k
65)	Deekshashree.N	Deeksha .N
66)	Bhavya Shree .S	Bhavya Shree .S
67)	Manasa .B	Manasa .B

94	Shranya .M. Gowda	Shranya M. Gowda
95	Vaishini .M	Vaishini .M
96	Sanjana .K	Sanjana .K
97	Amulya T. G	Amulya T. G
98	Keerthana .M	Keerthana .M
99	Tanuja .R.V	Tanuja .R.V
100	Karishree . M.S	Karishree . M.S
101	Amulya . N	Amulya . N
102	Vaishali .S	Vaishali .S
103	Rochitha . N	Rochitha . N
104	Manyashree .v	Manyashree .v
105	Subhiksha	Subhiksha .N
106	Yashoda .B	Yashoda .B
107	Bindu bai .S.S	Bindu bai .S
108	Tejashwini	Tejashwini
109	Bhoomika .G.	Bhoomika .G.
110	Nagalakshmi Bai H. M	Nagalakshmi Bai H. M
111	Bhoomika . M.N	Bhoomika . M. N
112	Nethravathi .y	Nethravathi .y
113	Srisitha . S.V	Srisitha .S.V
114	Amulya	Amulya
115	Jayalakshmi . N	Jayalakshmi . N
116	Deepika .B.	Deepika .B.
117	Bhavya .KR	Bhavya .KR



Outreach Report/ Feedback

School name	Morarji Desai Residential School for Boys
School address and distance from IISc	Morarji Desai Residential School for Boys (BC), Adakamaranahalli, Makali Post - 562162, Dasanapura Hobli, Bengaluru North Taluk, Bangalore Urban District
Team members	1. Renu Raman Sahu 2. Shruti Sharma 3. Krishna Vanjani 4. Archana Yadav
Topics covered	1. Herd Immunity using games and a model 2. Force on a current carrying wire in the presence of a magnetic field.
Team members' feedback/experience*	✓ <u>Renu Raman Sahu</u> • Students' response: The students were keenly interested in the demonstrations and were responding well to the questions asked to them based on the topics taught to them. • Students' behavior: It was a pleasure to teach students. They were well-behaved, respectful, and courteous towards their teachers and others. They made the learning experience enjoyable. • Teachers: They were concerned about the students and aware of the limitations and strengths of the students. They also attended the demonstration sessions. The principal of the school and all other staff welcomed us wholeheartedly and served us tea in the Principal's cabin. • Infrastructure: This school has good infrastructure, and classrooms equipped with projector and projector screen. It also has a

	playground. They have a science lab where they could do the practicals. • The male: female ratio: Since it is a boys-school, there were only male students. • The logistics: The school was less than 20 km away from IISc and we could handle the logistics on our own. The reimbursement for meals and transportation by the Karnataka State Government is much appreciated. • The Impact: The impact, in one word, was enormous. We could see the happiness of the children on their faces as the demonstrations started to work. The live demonstration model of teaching, where they directly see for themselves how the concepts are applied, is much more effective than the usual classroom teaching. The pictures attached herewith this report depict how engaged the students were in learning and understanding the concepts. • Our experience: Amazing. We are truly grateful for providing us with this opportunity to interact with children and learn about education in rural Karnataka. We felt happy that the students were able to understand what we were trying to explain them. They could relate the demonstration with the theory we taught them. The students were not only bright, but also have dreams to excel in future. We wish the students all the very best. This outreach have inspired us to conduct more such outreaches and kindle an interest towards science in students. • Room for improvement: The school as such was well managed and have all the basic facilities. The playground could be maintained better. The road connecting the school to the main road was very poor. It can
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	cause delays in receiving emergency helps (medical etc.) The roads connecting the school needs to be improved. ✓ <u>Shruti Sharma</u> ✓ <u>Krishna Vanjani</u> ✓ <u>Archana Yadav</u>
Date of visit	30 th November 2024



Figure 1: (From Left to right) Science Teacher, Principal, and the IISc scholars Archana Yadav, Krishna Vanjani, Renu Raman Sahu, Shruti Sharma



Figure 2: Students trying to apply the magnetic field on the Copper coil to observe the deflection and rotation of the coil on passing a DC current.



Figure 3: IISc scholar helping the students to try the demonstration themselves.



Figure 4: Students learning from the IISc scholar about the transmission of communicable diseases and importance of vaccination.



Figure 5: IISc scholars explaining the students about the scientific method.



Figure 6: Students learning about the Right hand thumb rule for the direction of magnetic field around a current carrying conductor.



Figure 7: IISc scholars with the participating students after the demonstrations.



Figure 8: IISc scholars with the participating students, the science teacher and the principal after the class.

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and

SCIENCE FOR RURAL INDIA (IISc Research Scholars Group)

Indian Institute of Science Campus, Bengaluru – 560 012

Outreach program for rural schools by Science for Rural India

Date: 30th November 2024

Name of the School / Venue: Morarji Desai Residential School for Boys,
Adakamahanahalli, Makali Post - 562162,

Sl. No.	Name of the Student Participant	Signature
1)	Althaf B	Althaf
2)	Anukalp H K	Anukalp
3)	Arin G	Arin
4)	Arya	Arya
5)	Bhanu prasad R	Bhanuprasad
6)	Charan M	Charan M
7)	Chinmay S	Chinmay
8)	Chirag B R	Chirag B.R
9)	Chiranjeevi D	Chiranjeevi
10)	Dhanush P	Dhanush
11)	Ginnees MR	Ginnees
12)	Gnanendra M	Gnanendra
13)	Gurukiran Y A	Gurukiran Y.A
14)	Gurusharan P M	Gurusharan P.M
15)	Hanumanth B	Hanumanth

16)	Hanumanth C	Han
17)	Harshith HN	H HN
18)	K pavan Kumar	K Pavan Kumar
19)	Karthik SR	K. S. R.
20)	Kaushik Gowda	Kows...
21)	Kurshal M.S	Kursh
22)	Lohith N	Lohith N
23)	M. adivalayya	M. adivalayya
24)	Manjunath theri	Manjunath
25)	Manoj KH	Manoj. KH
26)	Manoj N	Manoj. N
27)	Nadeem Basha	Nadeem
28)	Naven Kumar S	Naven Kumar S
29)	Nikhil M.	Neev
30)	Nilhin K	N
31)	pavan Kumar B	Pavan B
32)	prajwal J	Prajwal
33)	preetham I	Preetham
34)	puneeth Kumar	Puneeth
35)	puttaraju SB	Puttaraju
36)	Rohith D	Rohith D
37)	Raju C	Rajul
38)	Sogi Deekshith	Sogi
39)	Subhash Siddappa	Subhash S...
40)	Tejas	Tejas
41)	Veni Gopal	Venugopal

42)	Vennu N	Vf
43)	Vinay Kumar	<u>Vinay Kumar.M.</u>
44)	Vinod NH	Vinod N.F.
45)	Yadunandana K B	<u>Yadunandana K.B</u>
46)	Yashwanth O.	<u>Yashwanth.O</u>
47)	Yashwanth S	<u>Yashwanth.S</u>
48)	Yogeshwar	<u>Yogeshwar.S</u>
49)	Santhosh	<u>Santhosh</u>
50)	Abhilash G R	Abhilash
51)	Abhishek Y	<u>Abhishek.Y</u>
52)	Ajith M	Ajith
53)	Anil Kumar	Anil
54)	Arif M.	<u>Arif M</u>
55)	Basavaraj	Basavaraj
56)	Chenna Keshav	<u>Chenna Keshav</u>
57)	Chethan P	Chethan P
58)	Dhanush Gowda B T	<u>Dhanush Gowda B T</u>
59)	Digant R	<u>Digant</u>
60)	Deekshith ML	<u>Deekshith</u>
61)	Durstanth	<u>Durstanth</u>
62)	Ganesh B	<u>Ganesh</u>
63)	Hemanth Gowda	<u>Hemanth</u>
64)	Hillesh	Hillesh
65)	Kushal S	<u>Kushal</u>
66)	Kiran Kumar	Kiran
67)	Mallathesh	<u>Mallathesh</u>

68	Mallikarjun AS	<u>MAJ</u>
69	Mallikarjun SS	MAJ
70	Manjunath SB	MAJ
71	MB Kirshan	<u>MAJ</u>
72	Mohith R	<u>MAJ</u>
73	prajwal MK	MAJ
74	preetham	MAJ
75	preetham G P	MAJ
76	preetham LA	MAJ
77	preetham Naik	MAJ
78	preetham SS	MAJ
79	Rakshith Das R	MAJ
80	Ravi SS	MAJ
81	Rohith Kumar	MAJ
82	Samir Ahammed A	MAJ
83	Sangamesh B	MAJ
84	Sanyu B K	MAJ
85	Sathosh B	MAJ
86	Shiva Kumar	MAJ
87	Sri Ranganath	MAJ
88	Sujan DD	MAJ
89	Sujith Gowda R	MAJ
90	Vikas M.K	MAJ
91	Vikas Yadav	MAJ
92	Vikram M	MAJ
93	Vivek Guleed	MAJ



Outreach Report/ Feedback

School name	Atal Bihari Vajpayee Residential School and PU College (SC)
School address and distance from IISc	Bommavara, Uganawadi post - 562110, Devanahalli (taluk), Bengaluru Rural (district), School Code: 591
Team members	1. Siddhesh Rege 2. Nipun Jain 3. Aryan Shukla
Topics covered	1. Working Principle of Transformer (Electromagnetic Induction) 2. Introduction to polymers – using bouncing balls experiment 3. pH Indicators and an Introduction to Acids, Bases, and Neutral Substances
Team members' feedback/experience*	❖ <u>Siddhesh Rege and Nipun Jain</u> • Students' response: The students were curious and excited to have us in their campus. The students were very well behaved and patient while listening to the sessions. • Students' behavior: The students were disciplined but didn't communicate or responded to questions much, probably due to fear of speaking in English. • Teachers: The teachers greeted us and offered us refreshments. The teachers were very supportive of us and monitored the progress of the sessions. The teachers also intervened whenever necessary for explanation in local language • Infrastructure: This school was clean and well maintained. The classrooms were spacious and equipped with proper ventilation and lighting. The computer labs and the SMART lab in the facility was well equipped with basic science experiments. • The male female ratio: Among the students I found almost equal number of girls compared to boys in classes 9 and 10. • The logistics and impact: The logistics was nicely coordinated and properly managed. The driver was well behaved and the car was well maintained. The outreach was very impactful for me personally as I was overwhelmed by the students' immense curiosity and the overall experience was very fulfilling. • We would like to thank Karnataka State Council for Science and Technology and SFRI for arranging the event. It was very well designed and coordinated. • Our experience: The experience was very fulfilling and enjoyable. The students' curiosity was very contagious and

	also made us more motivated for the cause. Overall, the experience was very rewarding. • Suggestions for Improvement: Students should be more trained in English language for better communication in their future goals. ❖ Aryan Shukla • Class Interaction: The students were comfortable with English, although only a few actively participated in responding. • Student Behavior: The students were polite, well-mannered, and showed respect towards both me and my fellow team member. • Teachers: The science teacher was supportive and assisted me with the necessary equipment for the demonstration. They were also attentive and helpful towards the students. • Infrastructure: The school had decent infrastructure, including a functional science lab and clean washrooms. • Gender Ratio: The school was co-educational, with a good batch strength and an almost equal ratio of boys and girls. • Meal Facility: The tea was refreshing, and while the rice appeared well-cooked, I didn't taste it as I was already full. • Overall Experience: We are deeply grateful for the opportunity to interact with the students and gain insights into education in rural Karnataka. The students were particularly enthusiastic about observing color changes using turmeric and phenolphthalein. They even conducted some litmus paper tests themselves, showcasing their curiosity and interest in learning. • Suggestions for Improvement: Science lessons could be made more engaging by encouraging greater student-teacher interaction during teaching, rather than relying solely on traditional lecture-based methods.
Date of visit	30th November 2024









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and

SCIENCE FOR RURAL INDIA (IISc Research Scholars Group)

Indian Institute of Science Campus, Bengaluru – 560 012

Outreach program for rural schools by Science for Rural India

Date: 30th November 2024

Name of the School / Venue: Atal Bihari Vajpayee Residential School
and PU college (SC), Bommaravara,
Uganawadi Post - School Code 541, Bengaluru Rural
-562112

Sl. No.	Name of the Student Participant	Signature
1)	Shashi Kumar.N [10 th]	Shashi Kumar.N
2)	Pavan.B.M [10 th]	Pavan.B.M
3)	Jeethendra.B.N [10 th]	Jeethendra.B.N
4)	Basavaraju.N [1 st puc]	Basavaraju.N
5)	Shashank.S [10 th]	Shashank.S
6)	Chandan.R [10 th]	Chandan.R
7)	Chandan.B [10 th]	Chandan.B
8)	Jishnu Nayak [1 st puc]	Jishnu
9)	Hemanth [10 th]	Hemanth
10)	Neesaj.N [10 th]	Neesaj.N
11)	Preetham.M [10 th]	Preetham.M
12)	Harysha Vardhan.S.R [10 th]	Harysha
13)	Nikhil.N [10 th]	Nikhil
14)	Likith.D [10 th]	Likith.D
15)	Srujanth.S.U [10 th]	Srujanth.S.U

16)	Tharun. R.v [10 th]	Tharun
17)	Mithun. G [10 th]	Mithun. G
18)	Hemachandra. N [10 th]	Hemachandra
19)	Shreyas. M [10 th]	Shreyas
20)	Gurukiran. M (10 th)	Gurukiran
21)	Rajesh. C (1 st P.U.C)	Rajesh. C
22)	Mohammed Main [1 st P.U.C]	Mohammed Main
23)	Prajwal mp [1 st P.U.C]	Prajwal mp
24)	Maharajesh. N [1 st P.U.C]	Maharajesh
25)	Rajesh. M	Rajesh. M
26)	Gokul. R [10 th]	Gokul . R
27)	Mithun. NN [10 th]	Mithun. NN
28)	Harsha. N [10 th]	Harsha
29)	Rishi. S [10 th]	Rishi. S
30)	Mrudul. R [10 th]	Mrudul
31)	Abhishek. R [10 th]	Abhishek
32)	Chiranth Kumar. M.C. [10 th]	Chiranth
33)	Muthuraj. S [10 th]	Muthuraj
34)	Karthi. K. R [10 th]	Karthi
35)	Houthish Komara. M [10 th]	Houthish
36)	Harshith Kumar. K.V [1 st P.U.C]	Harshith
37)	Naveen. M [1 st P.U.C]	Naveen
38)	Tejas. N	Tejas
39)	SAGAR. A [10 th]	SAGAR . A
40)	Mithun Kumar. N [10 th]	Mithun
41)	Dushyanth. Nayak. S	Dushyanth

42)	Venkataramana C 1 st Puc	Venkataramana C
43)	B.R. Vijayendra Prasad (1 st Puc)	B.R. Vijayendra Prasad
44)	Deep Kumar N I Puc	Deep Kumar N
45)	Gopvardhan S 1 st puc	Gopvardhan S
46)	Bhuvan S 1 st puc	Bhuvan S
47)	Dhanush U 1 st puc	Dhanush U
48)	Ashmith H.D 2 nd puc	Ashmith H.D
49)	Sandeep V 1 st puc	Sandeep V
50)	Nishanth Gowda V (1 st Puc)	Nishanth Gowda V
51)	Preetham P (1 st Puc)	Preetham P
52)	Kaushik B (1 st Puc)	Kaushik B
53)	Varun K L (1 st Puc)	Varun K L
54)	Niranjan S (1 st Puc)	Niranjan S
55)	Sagar K (1 st puc)	Sagar K
56)	Nandishwara N (1 st Puc)	Nandishwara N
57)	Ganesh M (1 st Puc)	Ganesh M
58)	BHOOMIKA S	Bhoomika S
59)	BINDUSHREE M	Bindushree M
60)	Pallavi N	Pallavi N
61)	Hemalatha V (1 st PU)	Hemalatha V
62)	Nisha V (1 st PU)	Nisha V
63)	Jyothika R [1 st PU]	Jyothika R
64)	Amrutha M [1 st Puc]	Amrutha M
65)	Sourabhitha M (1 st Puc)	Sourabhitha M
66)	Neha P	Neha P
67)	Kamunathree G.C	Kamunathree G.C

68	Yamini. n	Nyoni
69	Premalatha. G. V	Pranitha. G...
70	Meenakshi Ist puc	Meenakshi
71	Chaitthera. K. M Ist puc	Chaitthera. K. M
72	Lakshya. G. S Ist puc	Lakshya. S
73	M. Ganavi Ist puc	M. Ganvi
74	Kavya. A. P Ist puc	Kavya. A. P
75	Xanthree. S. B Ist puc	S. B. Xanthree
76	Xandhini. 8th puc	Xandhini
77	Supriya. G. R 8th puc	Supriya.
78	Manjatha. V 8th puc	Manjatha. V
79	MYTHRI. N Ist puc	mythri. n
80	Gunashree C. M 1st PUC	GUNA.
81	Anusha. S 1st PUC	Anusha. S
82	Yashaswini. S 1st PUC	Yashaswini
83	Anila. S 1st PUC	Anila. S
84	Chaitanya. G 10th Std.	Chaitanya. S
85	Nithya. B. M	Nithya. B. M
86	Harshitha. K. B	Harshitha. K. B
87	Mamatha. T. K	Mamtha. T. k
88	Ashwini. 1st puc	A
89	Vidyashree. V 1st PUC	Vidya. V.
90	Bhavya. N 1st PUC	Bhavya. N
91	Tharushree B. M	Tharush B. M
92	Gangothri. G	Gangothri. G
93	Roopashree B. V.	Roopashree. B. V

94.	Manasa K. N	Manasa
95.	Bindhu 1 st PUC	Bindu
96.	Komala 1 st puc	Koma
97.	Saniya 1 st puc	Sani
98.	Thaneswari. S 1 st PUC	Thaneswari. S
99.	Prakruthi. M.D 1 st PUC	Prakruthi
100.	Sinchana. D. P 1 st PUC	Sincha. D. P.
101.	Klavitha. R 1 st puc	Klavitha. R.
102.	Ankitha. M XI th puc	Ankitha. M
103.	Bhavya. R 9 th	Bhavya
104.	Bhuvanashree 9 th	Bhuvan
105.	Priyanka. S 9 th	Priy
106.	Bhavanar. R 9 th	Bhavan
107.	Sharanya 9 th	Sh
108.	Harshitha. A 9 th	Harshitha
109.	Ananya shree. K 9 th	Ananya shree. K.
110.	Pavana 9 th	Pan
111.	Swathi 9 th	Swathi
112.	Lakshmi. M 9 th	Lakshmi M
113.	Harsha. Y. S 9 th	Harsha. Y. S
114.	Harish Gowda 9 th	Harish
115.	Powtham 9 th	Powtham
116.	Tharunja Lakshmi. L 9 th	Tharunja
117.	Komala. M 9 th	Ku
118.	Bhargavi. R 9 th	Bhargavi
119.	Pochara. N 9 th	Pochara. N.

120	Lekhana. C.H	9 th	Lekhana. C.H.
121	Lakshmi. S	9 th	Lakshmi. S.
122	Chethan. M	9 th	Chethan.
123	Suman S.R	9 th	Suman
124	Hithesh	9 th	Hithesh
125	Tharun. CR	9 th	Tharun
126	Jeeran	9 th	Jeeran
127	Sanjay. R.O	9 th	Sanjay.
128	Sanketh. M	9 th	Sanketh.
129	Manindara	9 th	Manindara
130	Gokul Chandana	9 th	Gokul
131	Muthu. B.N	9 th	Muthu B.N
132	Lakshappa. G	9 th	Lakshappa G
133	Lokjeeth. R	9 th	Lokjeeth R
134	Maitesh. P	9 th	Maitesh
135	Mohith Raj K.S.	9 th	Mohith
136	Tharun. T	9 th	Tharun
137	Achith. N	9 th	Achith
138	Nishith. N. Murthy	9 th	Nishith



Outreach Report/ Feedback

School name	Kittur Rani Chennamma Residential School (SC), School Code 441
School address and distance from IISc	Balepura, Chennarayapatna hobli, Devanahalli, Karnataka - 562110
Team members	1. Ashutosh Panchal 2. Atal Singh 3. Uday Kiran 4. Vanshika Makol
Topics covered	1. Construction of a simple lemon battery 2. Working of compound microscope and demonstration of cells under a microscope 3. Demonstration of digestive system using human anatomy model
Team members' feedback/experience*	✓ <u>Ashutosh Panchal</u> • This was an all-girls residential school with around 250 students from grades 6th to 10th. We conducted demonstrations for students of grade 8th, 9th and 10th. The topic covered was electric potential and how electrochemical reaction is important for electricity generation in batteries. This was demonstrated by constructing a simple circuit connected to a battery made from lemons and metals with different electronegativities. • The students were able to converse in English efficiently. They showed good interest in the demonstration and were inquisitive. They were well disciplined and curious. While discussing various career options after schooling, a lot of them showed interest in pursuing higher studies. • The infrastructure of the school is really good. They have a well-equipped library and a functional science and computer lab. In extracurricular activities they have martial arts and cultural activities. They also have a basketball court. The mess is well maintained and hygienic. • The logistics were well arranged. • Overall, it was a good experience. ✓ <u>Uday Kiran</u> • Explained Human Digestive System Parts and Functions to Class 10 in detail so that they can attend the topic with ease when asked in their board. Model helped them visualize the system to a detail as said by them in the feedback. • The same system has also been explained to class 9th and 8th students but to lesser detail and depth. • Explained a lesson to class 9th students, which they found difficulty with.

	• Infrastructure is best and they have a well-planned routine Life with extra-curricular activities. ✓ <u>Atal Singh and Vanshika Makol</u> • During the outreach program of SFRI. I Atal Singh, Integrated PhD, Biological Sciences conducted an educational session at a rural school, focusing on the fundamentals of microscopy. My aim was to introduce students to the fascinating world of microscopic science. The lecture covered the basics of how microscopes work, explaining key components and their functions to make the concept accessible for the students. In the lecture I introduced them with three types of microscopes namely Simple Microscope, Compound Microscope and Electron Microscope. The lecture began with an explanation of the microscope's structure, detailing essential components like the lenses, light source, and focusing knobs. You discussed how each part functions, illustrating how a microscope magnifies tiny objects to make them visible to the human eye. During the demonstration, I gave students hands-on experience, allowing them to observe microscopic specimens. As students took turns using the microscope, they observed various samples, which included Red blood cells and protists amoeba, giving them an exciting glimpse into a normally unseen world. This practical approach likely enhanced their understanding and sparked curiosity, making complex scientific ideas more approachable. My visit provided valuable exposure to microscopy, encouraging interest in science among the students. My lecture highlights the power of science in understanding the natural world. • In the end I also add career guidance session and Q&A session. I was really happy to see the excitement on their faces after learning something new. They enjoy the lecture so much that the students asked when will I visit them again. They asked me questions about different topics in science and their curiosity to learn different things was unmatched. Thank you SFRI and KSCST for giving me this wonderful opportunity.
Date of visit	07 th December 2024

Photos





KARNATAKA STATE COUNCIL FOR SCIENCE AND TECHNOLOGY

Indian Institute of Science Campus, Bengaluru – 560 012
Website: www.kscst.org.in || Email: office.kscst@iisc.ac.in || Tel: 080-2334 1652

and

SCIENCE FOR RURAL INDIA (IISc Research Scholars Group)

Indian Institute of Science Campus, Bengaluru – 560 012

Outreach program for rural schools by Science for Rural India

Date: 07/12/24

Name of the School / Venue: Kitturu Rani chennamma Residential
School Balepura [661]

Sl. No.	Name of the Student Participant	Signature
1)	Prathiksha.M	Prathika.M
2)	Akshaya	Akshu
3)	Pruthvi Angadi	Pruthvi Angadi
4)	Spoorthi.M	Spoorthi.M
5)	Vaishithank	Vaishithank
6)	Jeepika.	Jeepika.
7)	Pallavi. P	Pallavi
8)	Vedhasheer P.M	Vedhasheer
9)	Chaitanya.M	Chaitanu.M
10)	Soujanya.K	Soujanya.K
11)	Thanya. R.S	Thanya
12)	Harshitha. L.M	Harshi
13)	Bhoomika. D	Bhoomi. D
14)	Divyashree. S	Divya
15)	Kavya. R	Kavya.R

16)	Swathi.M	Swathi.M
17)	Vaishnavi.C.M	VCM
18)	Ankitha.B.C	Ankitha.B.C.
19)	Ashwini.R	Ashwini.R
20)	Vismitha.S	Vismitha.S
21)	Varsha.M	V.aul
22)	Puli. Shree Varshitha	pulishwarskrittha
23)	Swapnashree.N.P	Swapna.N.P
24)	Nanditha.V	Nanditha.V
25)	Hema	H.ema
26)	Neethyashree.C.L.	Neethya.C.L.
27)	Ankitha.H.M	Ankitha.H.M
28)	Shilpa.A	Shilpa.A
29)	Manasa.k	manasa.k
30)	HarshaShree.C	Harsha.C
31)	Falpana.L.V	Falpana.V
32)	Bindhu shree.M	B.S.M.
33)	Dhanu Shree.E.M.	Dhanu.S
34)	S. meghana.	S.meghana
35)	Deekshitha.D.N	Deekshitha.D.N
36)	Chyanika.V	Chyanika.V
37)	Navya Shree.N.P	Navya Shree.N.P
38)	Deeksha.B	Deeksha.B
39)	Kusuma.K.V	Kusuma.K.V
40)	Poojana.H.N	Poojana.H.N
41)	Lekitha.M	Lekitha.M

42)	Hemashree.M	Hema.M
43)	Bavana.A	Ba A
44)	Namratha. S	<u>Namr.</u>
45)	Shubha Shree. K	shubha .K
46)	Vijwala.C.M	W <u>Vijwala</u> C.M.
47)	Thirisha. D.M	<u>Bsha</u> D.M
48)	Bhoomika.S	Bhoomika.S
49)	Lavanya. SM	L.M
50)	Sanjana. S.H	San
51)	Vijayalakshmi. S	<u>Viji</u> .S
52)	Spandana.S	Sp
53)	Harshitha.M	<u>Harsha</u>
54)	Nalina.B.M	N
55)	Tharushree K.S	<u>Tharu</u> .S
56)	Alithya Shree. K.C	<u>Alithya</u>
57)	Bhavya.M	Bhavya.m
58)	J. Shree Harshitha	H
59)	Kousalya. S	<u>Kou</u>
60)	Vidyaashree H.D	V
61)	Lisha. S	L S
62)	Bhavani. B.S	<u>Bhav.</u>
63)	Sanjana.R	San
64)	Dayashree P.N	<u>Daya</u>
65)	Akshaya.K	Ak
66)	Gunvika. I.C	<u>Gu</u>
67)	Deeksha.R	Deeksha.R

68)	Sanjana . P	St
69)	Harshitha . M	Ho
70)	Chethana . K.	ch.ks
71)	Pallavi . A	AP
72)	Ganashree D.C	<u>Ganesh D.C</u>
73)	Bhoomika RY	B.R.
74)	SPARSHITHA V.D	<u>Sparshitha</u>
75)	Navya shree . N	<u>Navya</u>
76)	Manyashree K . V	<u>(50)</u>
78)	Archana . S	<u>Arj.</u>
79)	Vanshika . S	<u>Vanshi</u>
80)	Anusha . B	<u>Anu . B</u>
81)	Archana . T	<u>Archa . T</u>
82)	Chaitanya . B . M	<u>Chaitanya . B . M</u>
83)	Rakshitha . K	<u>Rakshitha</u>
84	Nikshitha . P	<u>N.P.</u>
85	Anushka . P	<u>Anu.</u>
86.	Bhavya shree . H &	<u>Bhavya</u>
87.	Ganavi . T	<u>Ganavi</u>
88.	Bindu shree	<u>Bindu</u>
89.	Sowmya . R	<u>S</u>
90	Pravathi . K . N	<u>Pravathi . K . N</u>
91.	Ananya . M	<u>Anu</u>
92.	Navya shree . K . C	<u>Navya</u>
93.	Rakshitha . L	<u>Rakshitha . L</u>
94.	Kruthika . P . V	<u>Kruthika</u>

95	Keerthana. N. M	to
96	Bhargavi. M	B
97	Thanu shree. R	Hadu. R
98	Dushmika. R	th
99	Poorvi. E	th
100	Hanya. Shree. K. V.	vaidya Honayphre
101	Meha shree. M	An
102	Misha. B. Gowda.	mish. B
103	Varshini. S	Varshi. S.
104	Gyanvi. A. N	Gyan
105	Inchara. A. M	Inchu.
106	Harshitha. V	Had
107	Lochana. N	Lochu.
108	Harshitha. N	Har.
109	Shalini. S. S	*Shali
110	Narya Shree. A. S	N. S.
111	Meenakumari. N. M	meena. N. M.
112	Keerthi. T. S	Keerthi.
113	Sanchana. M	Sancha.
114	Harshitha. J	H.
115	Spoozhi. S. K	Spa
116	Tanuja. S	Tanu.
117	Tejaswini. G. M	Tea
118	Bhanu shree. C. M	BH
119	Lakshmi	Lak
120	Bhagya shree	*Bh



Outreach Report/ Feedback

School name	Kittur Rani Chennamma Residential School (SC), School Code: 387
School address and distance from IISc	Telagarahalli, Anekal, 562106, Bengaluru South District
Team members	1. Siddhesh Rege 2. Robin Bajaj 3. Pranay Kumar
Topics covered	1. Magnetic induction by electric current 2. Interference of Light 3. Refraction through glass slab and prism
Team members' feedback/experience*	✓ <u>Siddhesh Rege</u> • Students' response: The students were curious and excited to have us in their campus. The students were very well behaved and patient while listening to the sessions. • Students' behavior: The students were curious, well-behaved and disciplined. • Teachers: The teachers greeted us and offered us refreshments. The teachers were very supportive of us and monitored the progress of the sessions. The teachers also intervened whenever necessary to maintain decorum. • Infrastructure: This school was clean and well maintained. The classrooms were spacious and equipped with proper ventilation and lighting. The computer labs and the SMART lab in the facility was well equipped with basic science experiments. • The logistics and impact: The logistics was nicely coordinated and properly managed. The driver was well behaved and the car was well maintained. The outreach was very impactful for me personally as I was overwhelmed by the students' immense curiosity and the overall experience was very fulfilling. • I would like to thank Karnataka State Council for Science and Technology and SFRI for arranging the event. It was very well designed and coordinated. • Our experience: The experience was very fulfilling and enjoyable. The students' curiosity was very contagious and also made us more motivated for the cause. Overall, the experience was very rewarding. ✓ <u>Robin Bajaj</u> □ Topics Covered: To begin, I asked some basic questions about optics to ease the students into the subject, and we engaged in a

	discussion about science. Along with Pranay, I demonstrated the phenomenon of refraction and invited the students to participate and replicate the experiment themselves. Following this, I conducted the experiment of the day, focusing on the <i>Interference of Light</i>. I started by explaining the wave nature of light and then used a demonstration to simplify the concept of interference for the students. ☐ Students' Response: The students were curious and excited to have us on their campus. Initially, they were a bit shy, but our open and friendly interaction encouraged them to show greater interest in science. ☐ Students' Behavior: By the end of the session, the students were actively asking questions about other aspects of physics. We were happy to engage with them and address their queries. The experience was both impactful and fulfilling. ☐ Acknowledgment: I would like to express my gratitude to the Karnataka State Council for Science and Technology and SFRI for organizing the event. It was thoughtfully designed and seamlessly coordinated. ✓ <u>Pranay Kumar</u> • Students' Response: Quite active and responsive in the class. They understood English pretty well and communication was less of an issue. Initially, when the theoretical aspect was being covered, they responded pretty well with the follow-up questions based on the concepts of refraction. They were amazed when they got to see the refraction phenomena through slab and prism. • Students' Behavior: They were disciplined, curious and even asked very good questions by the end of the session, even trying to relate one topic to other having an open mind about the interdisciplinary nature of science. • Infrastructure: The school is well equipped with ventilated rooms, projectors and a basic science lab. Also, the rooms are clean, there is a large playground available for the children. • Experience: It was an inspiring experience for me to see so many children being interested in science and asking curious questions. This has also motivated me to participate in upcoming outreach sessions.
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	• Acknowledgment: Sincere thanks to Karnataka State Council for Science and Technology and SFRI for making the outreach session possible with excellent logistics.
Date of visit	7th December 2024







Galaxy M33 5G
07 December 2024 11:07 am



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Indian Institute of Science Campus, Bengaluru – 560 012
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and

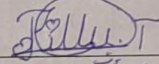
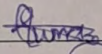
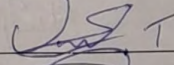
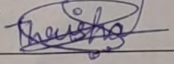
SCIENCE FOR RURAL INDIA (IISc Research Scholars Group)

Indian Institute of Science Campus, Bengaluru – 560 012

Outreach program for rural schools by Science for Rural India

Date: 7th November 2024

Name of the School / Venue: Kittur Rani Chennamma Residential School
(SC), School Code: 387, Telagahalli,
Anekal - 562106, Bengaluru South District

Sl. No.	Name of the Student Participant	Signature
1)	E. Abhinaya	
2)	Hemashree R.	Hema. R.
3)	Anjali. A	Anjali. A
4)	Prakruthi. T	
5)	Akshatha. A	Akshatha. A
6)	Nayana. M	Nayana. M.
7)	SANJANA D.S	Sanjana
8)	Deevitha. R	Devi. R
9)	chandana. V. R	chandana. V. R. Reddy
10)	Shrithana. M	Shrithana. M
11)	Suria. M. B	
12)	Jahnavi. M	Jahnavi. M
13)	manasa. R	M. R
14)	Usha. T	
15)	Thrishanka. A. R	
16)	Deepika	Deepika

17)	Ravani P. K	Ravani
18)	Nandini Lamani	Nandini
19)	Nanditha. B...	N...
20)	Prigadachini. N	Prigadachini
21)	Kamala. M	K. C...
22)	Pooja. K. T	Pooja
23)	Purkpa. V	Purkpa. V
24)	Shreya. S. Avaradi	Shreya S.
25)	GOLRISHREE. B.	Gowri. B.
26)	Nayana S B	Nayana S B
27)	Prateeksha. S	Prateeksha S
28)	Thanushree. N	Thanu. N
29)	Sanjana. M	Sanjana. M
30)	Lakshmi Bai	Lakshmi
31)	Archana. Phavan ...	Archana
32)	Sonika. H	Sh...
33)	Sowmya. S	Sowmya
34)	Sheetal. K	Sheetal. K
35)	Anjana. M	Anjana. M
36)	Prema	Prema
37)	Swarna	Swarna
38)	Nikitha. M	Nikitha. M
39)	Yashaswini. K	Yashaswini
40)	Shikha. B	Shikha
41)	Manya. G	Manya. G
42)	Rajashree. H	Rajashree. H

43)	Yashaswini .R	Yashaswini .R
44)	Rashmi .P	Rashmi .P
45)	Shreya .S.K	Shreya .S.K
46)	Tejaswini .R	Tejaswini .R
47)	Sahana .N	Geetha
48)	Madhumathi .E	Madhumathi .E
49)	Chinmayi .N	Chinmayi .N
50)	Parithra .M.K	Parithra .M.K
51)	Chaitanya .B	Chaitanya .B
52)	Lalari .R	Lalari .R
53)	Netthra .R	Netthra .R
54)	Vidhya .M	Vidhya .M
55)	Arushka .R	Arushka .R
56)	Pallavi .M	Pallavi .M
57)	Keerthana .A	Keerthana .A
58)	Manasa .L	Manasa .L
59)	Carva .M	Carva .M
60)	Pallavi .S	S. Pallavi
61)	Poonima .S	Poonima .S
62)	K. Brindha	Brindha
63)	Rebecca Rachel .J.L	Rebecca Rachel .J.L
64)	Sankeerthana .R	Sankeerthana .R
65)	Nithya .P	Nithya .P
66)	Shravani .M	Shravani .M
67)	RavaliKa .A	RavaliKa .A



Outreach Report/ Feedback

School name	Morarji Desai Residential School
School address and distance from IISc	Morarji Desai Residential School (BC-12), Dodda Alahalli, Kanakapura (T), Ramanagara (D) Pin – 562117
Team members	1. Renu Raman Sahu 2. Aravind Kumar Yelashetty 3. Priyanka Chinchanasoor 4. Sanjana Kiran Tikare
Topics covered	1. Force on a current carrying wire in the presence of a magnetic field. 2. Image formation in a Pin Hole Camera
Team members' feedback/experience*	✓ <u>Renu Raman Sahu</u> • Students' response: The students were keenly interested in the demonstrations and were responding well to the questions asked to them based on the topics taught to them. They were answering in unison, confidently when we asked them the questions about the topics we taught them. • Students' behavior: They did a very heartwarming welcome for us. They had arranged a small welcome ceremony along with an inaugural session. It was a pleasure to teach students. They were very disciplined, well-behaved, respectful, and courteous towards their teachers and others. They made the learning experience enjoyable. • Teachers: The teachers and the principal were caring for the students. The students respected their teachers and were obedient and disciplined in their presence. They also attended the demonstration sessions and

	assisted us during the demonstrations. The principal of the school and all other staff welcomed us wholeheartedly and served us tea and snacks in the Principal's cabin. • Infrastructure: This school has good infrastructure, and classrooms. It also has a playground. They have a science lab where they could do the practicals. • The male: female ratio: We could see only one female teacher in the school who was their kannada teacher. • The logistics: The school was about 90km away from IISc and it took us two hours to reach the school by cab. We really appreciate the transportation arrangement by the Karnataka state government. Everything went as planned, we could reach on time to the venue and the demonstrations was over within scheduled time. The return was also smooth. • The Impact: To cite an example of the impact, there were three girls who tried to make a Pin hole camera before but it did not work. When we taught them the theory and then showed how it works using the demonstration, we could really feel their happiness and gratitude towards us on their faces. We could see the excitement of the children on their faces as the demonstrations started to work. The live demonstration model of teaching, where they directly see for themselves how the concepts are applied, is much more effective than the usual classroom teaching. The pictures attached herewith this report depict how engaged the students were in learning and understanding the concepts. • Our experience: Amazing. We are truly grateful for providing us with this opportunity to interact with children and
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	learn about education in rural Karnataka. We felt happy that the students were able to understand what we were trying to explain them. They could relate the demonstration with the theory we taught them. The students were not only bright, but also have dreams to excel in future. We wish the students all the very best. This outreach have inspired us to conduct more such outreaches and kindle an interest towards science in students. • Room for improvement: The school as such was well managed and have all the basic facilities. We think that there is a need of more science teachers, each for physics chemistry and biology. Currently only one teacher manages the physics, chemistry and the biology of all the classes from class 6th to class 10th. ✓ <u>Aravind Kumar Yellashetty</u> ✓ <u>Priyanka Chinchanasoor</u> ✓ <u>Sanjana Kiran Tikare</u>
Date of visit	14th December 2024



Figure 1: Students listening attentively to the explanation of the demonstrations.



Figure 2: Students looking through the Pin Hole camera



Figure 3: Science lab in the school



Figure 4: Students preparing to welcome us as we reached the school.



Figure 5: Students trying the experiment themselves. The happiness on their faces when it started working.



Figure 6: SFRI volunteers teaching the students and explain how the model works.



Figure 7: The final picture before leaving the school. The principal bids us a good-bye and a farewell.

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and

SCIENCE FOR RURAL INDIA (IISc Research Scholars Group)

Indian Institute of Science Campus, Bengaluru – 560 012

Outreach program for rural schools by Science for Rural India

Date: 14th December 2024

Name of the School / Venue: Morarji Desai Residential School (BC-12), Dodda Alahalli,
Kanakapura (T), Ramanagara (D) Pin – 562117

Sl. No.	Name of the Student Participant	Signature
1)	Anu. H. R	Anu H R
2)	Anusha.	Anusha.
3)	Ashwath Gowda. R.	Ashwath Gowda R.
4)	Bharat	Bharath
5)	Bindu Shree G. K	Bindu Shree G. K
5)	chandrashelkar. M.	Chandrashekar. M
7)	chetan Naik	Chethan Naik
8)	Gagan Gowda. M. R	Gagan Gowda.
9)	Harsha. P. M	Harsha P.M
10)	Impana. N	Impana. N
11)	Jeevan. N. R	Jeevan. N. R
12)	Kruthi. C	Kruthi. C
13)	Lekhana	Lekhana.
14)	Mahadevamma. H. M.	Mahadevamma. H.M
15)	Manoj. V	Manoj B.V

16)	Nishanth Kumar. N.	Nishanth Kumar
17)	Pavan Kumar. G	Pavan Kumar. G
18)	Poojish. C.	Poojish. C
19)	Preetham Gowda. B. S.	Preetham Gowda. B.S
20)	Preetham M.N	Preetham. M.N
21)	Pulithesh. K. S	
22)	Rachana. T. M.	Rachana. T.M.
23)	Rashmi.	Rashmi
24)	Rohith Gowda. T. S	Rohith Gowda. T.S
25)	Sagar. N.	Sagar. N
26)	Sahana bai	Sahana Bai
27)	Sanjay. A	Sanjay. A
28)	Sanjay. H. M	Sanjay H. M
29)	Shivani A. S.	Shivani. A. S.
30)	Shivu. D.	Shivu. N. D
31)	Shreya. P.	Shreya. P.
32)	Shreyas Krishna	Shreyas Krishna
33)	Shri Lakshmi	Shree lakshmi
34)	Sinchana	
35)	Sinchana. A. N	Sinchana A.N
36)	Siri. H.	
37)	Sneha. N.	Sneha. N.
38)	Snehalatha. S.	Snehalatha. S
39)	Tanmay Gowda. B. C	Tanmay Gowda
40)	Tarun. S. K.	Tarun S. K.
41)	Tarun Gowda K. R	

42)	Thoushik Kumar	Thoushik Kumar
43)	Varshini. R	Varshini. R.
44)	Varun. Gowda. T. P.	Varun Gowda T.P
45)	Vinyas Gowda. H. S	Vinyas Gowda H.S.
46)	Vishwas Raj	Vishwas Raj.
47)	Yashwanth. H. N	Yashwanth. H.N
48)	Ajay	Ajay
49)	Ameetha. S	Ameetha S
50)	Bhanvitha. P	Bhanvitha P
51)	Dhanush. M,	Dhanush
52)	Dhanush Ram. H.	Dhanush Ram. H.
53)	Dinesh. H. M,	Dhesh. H.M
54)	Divyashree. S	Divyashree. S
55)	Ganashree. G. B	Ganashree G. S.
56)	Gayathri	Gayathri
57)	Harshith. N	Harshith. N
58)	Hindu Shree	Hindu Shree
59)	Jeevan H. M	Jeevan. H.M
60)	Jeevan. P	Jeevan. P
61)	Jeevan. S	Jeevan S
62)	Kishor	Kishor. H.S.
63)	Koushik Gowda. D. S	Koushik Gowda D.S
64)	Kushal Gowda. D. S	Kushal Gowda D.S
65)	Likith. U	Likith. U.
66)	Lokesh. R	Lokesh. R
67)	M. Girish	

68	Manasa	Manasa
69	Manoj	Manoj
70	Mohan. P	
71	Nikhil Dev. C	Nikhil Dev. C
72	Nishanth Naik	
73	Pavan Gowda. R.	Pavan Gowda. R
74	Poornima P. S	Poornima P. S
75	Poojika. Y. P.	
76	Prarthana. V	
77	Prashanth. A	Prashanth. A
78	Prashanth. B. U	Prashanth. B. U
79	Poorthvi. C. K.	Poorthvi C. K.
80	Purnith Kumar. N. C	Purnith N. C
81	Reshma. N	Reshma. N
82	Sanika. U	Sanika. U
83	Sanjay Gowda M. C	Sanjay Gowda. M. C
84	Sanjana R	Sanjana. R
85	Sharan. M. S	Sharan. M. S
86	Shashank Gowda X. S.	Shashank Gowda. X. S.
87	Shivasiddha Gowda.	Shivasiddha Gowda.
88	Shivu S.	Shivu. S
89	Sinchana.	Sinchana
90	Sinchana. R	Sinchana. R
91	Srinivas	Srinivas
92	Swathi. M	Swathi. M
93	Tejas Gowda. T. C	Tejas Gowda T. C

120	Nandish. D.S	Nandish. D.S.
121	Nishanth Gowda K. A	Nishanthgowda.k.a
122	Prajwal D. K.	Prajwal D.K.
123	Punitha B. N	Punitha B.N.
124	Punith H.S	Punith H.S
125	Ranjitha	Ranjitha
126	Ravi Naik	Ravi Naik
127	Sahana. G	Sahana.G
128	Shreyas B. J.	Shreyas. B-J
129	Shru Raksha P.	
130	Sunitha Bai	Sunitha Bai
131	U. M. Rajeeva	Rajeeva U.M
132	Varalakshmi. T. M	Varalakshmi. T. M
133	Varanahalakshmi. K	Varanahalakshmi. K
134	Yashashwini. R	Yashashwini. R.
135	Yashu Gowda. R	Yashu. Gowda. R
136	Yashwanth. M	Yashwanth. M
137	Yashwanth. N. S	Yashwanth. N.S.

94	Varshini	Varshini M.S.
95	Veena bai. P	Veena bai
96	Yashwanth. C.	Yashwanth: C
97	Yogheshwar. K. A	Yogeshwar. K. A.
98	Aishwarya	Aishwarya
99	Anil Kumar. D. S	Anil Kumar. D. S
100	Anu. C. M	Anu. C. M.
101	Anushka. S.	Anushka. S
102	B. H. Janavi	B. H. Janavi
103	B. R. Deepthi	B. R. Deepthi
104	Bharath. R	Bharath R
105	Bhavani	
106	Bindu Shree	Bindu Shree
107	Gayathri. K. R.	
108	Girish Gowda. A. P.	Girish Gowda A. P.
109	Gowtham. T. S	Gowtham T. S
110	Gururaju. B. S	Gururaju. B. S
111	Harsha. V	Harsha. V
112	Hithesh. R.	Hithesh. R.
113	Jayanth. M	Jayanth M.
114	Joel Shawn.	Joel Shawn.
115	Kamlesh Gowda K. L	Kamlesh Gowda K. L
116	Kishor Kumar. C.	Kishor Kumar. C
117	Kushal Gowda B. N	Kushal Gowda B. N.
118	Manasa	Manasa
119	Manasa D. M	Manasa D. M.



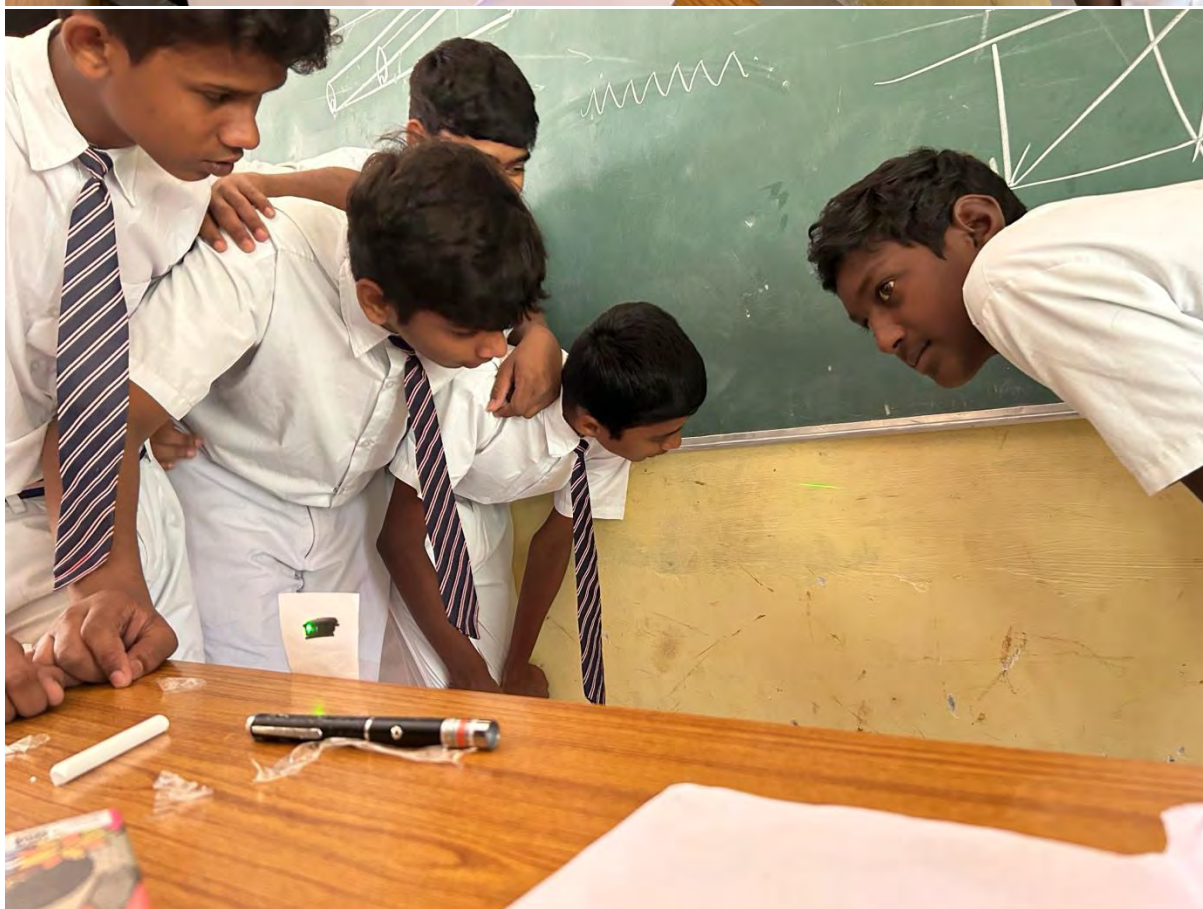
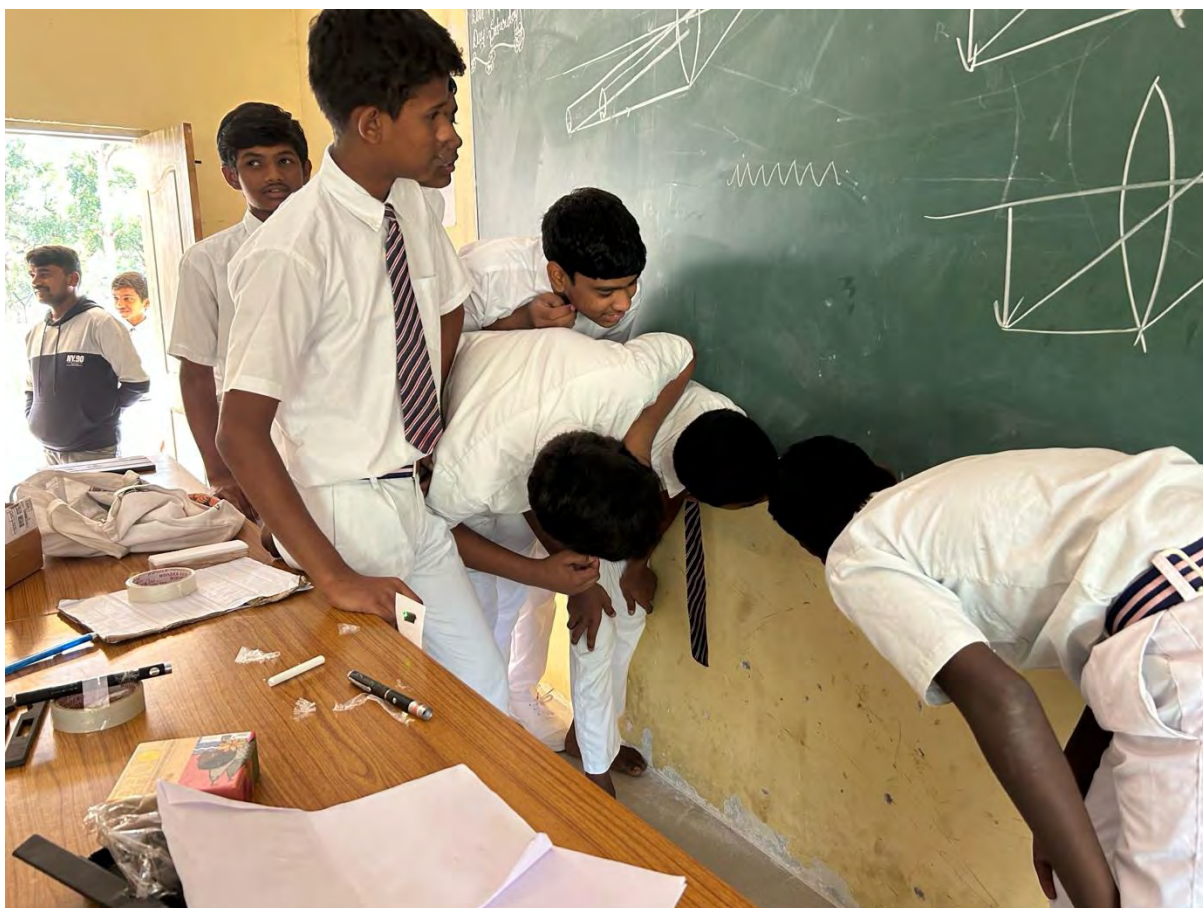
Outreach Report/ Feedback

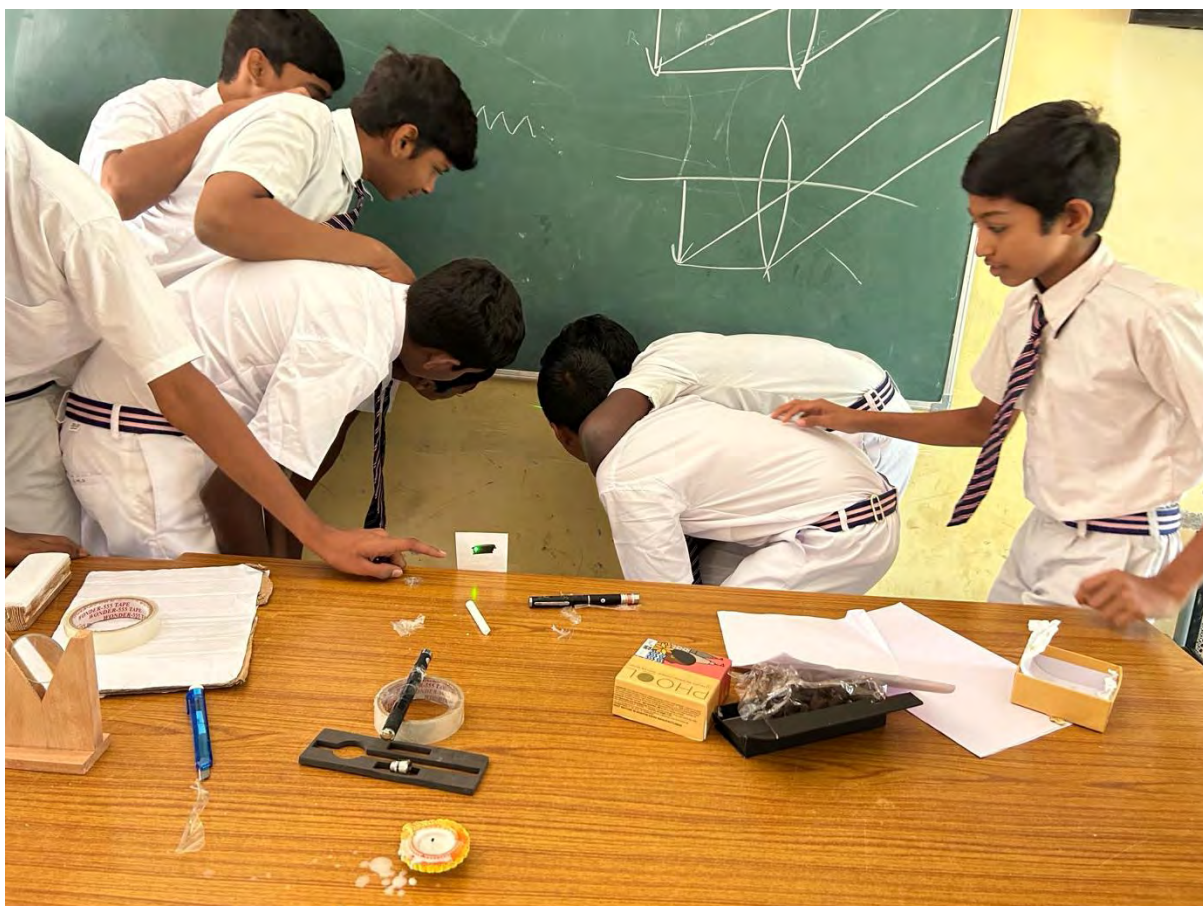
School name	Morarji Desai Residential School, BC-18, Byramangla, Gollahalli, Ramanagarq, 562109
School address and distance from IISc	BC-18, Byramangla, Gollahalli, Ramanagarq, 562109 (48km)
Team members	1. Robin Bajaj 2. Yogesh Thapliyal
Topics covered	1. Refraction, Focussing through lens, Interference and single slit diffraction 2. Force, Concept of mass and weight, Gravity, Pressure
Team members' feedback/experience*	✓ <u>Robin Bajaj</u> <u>Topics Covered:</u> To begin, I asked some basic science questions to help the students ease into the subject, leading to an engaging discussion about science. Together with Yogesh, I demonstrated the phenomenon of refraction, encouraging the students to participate and replicate the experiment themselves. The highlight of the session was the experiment on Interference of Light (Young's double-slit experiment) and single-slit diffraction. I introduced the wave nature of light using a simple explanation of the addition of crests and troughs in waves, followed by a demonstration to clearly convey the concept of interference. <u>Students' Response:</u> The students were divided into two groups: the first session was for 9th and 10th graders, followed by a session for 7th and 8th graders. They were excited and curious to have us on their campus. Initially shy, they became more engaged as we interacted with them openly and enthusiastically. Every student stepped forward to perform the experiments, making the outreach highly successful. <u>Students' Behavior:</u> By the end of the session, the students were asking thoughtful questions about various aspects of physics. We enjoyed answering their queries and engaging with them. The experience was deeply impactful and fulfilling. The students gave us handmade mementos made of flowers, and we took selfies with them to capture the memories. They also invited us to have lunch in their mess, where we interacted further in their canteen. The food at the school was exceptional, and the location, nestled in a beautiful natural setting, added to the charm of the visit. The school's science and math teachers were incredibly kind and supportive throughout the event. <u>Acknowledgment:</u> I sincerely thank the Karnataka State Council for Science and Technology and SFRI for organizing this wonderful event. It was thoughtfully planned and flawlessly executed.

	✓ <u>YOGESH THAPLIYAL</u> <u>Topics Covered:</u> I wanted to show them, how pressure difference can cause liquids to flow so I started to build some basics by introducing the concept of force and pressure and then I described the difference between mass and weight and help them to understand that air around us also has some mass and hence it exerts pressure all the time which we call atmospheric pressure. To demonstrate this, I asked the students to try drinking water from a glass using a regular straw first and then using a punctured straw. They found it much harder to drink with the punctured straw, and then I explained them why this is happening. <u>Students' Response and Behavior:</u> As Robin has also mentioned, the students, divided into two groups—9th and 10th graders in the first session and 7th and 8th graders in the second—were excited and curious to have us on campus. Initially shy, they quickly warmed up and actively participated in the experiments. By the end, they were asking very nice questions related to the topics we presented and beyond that also. The session was impactful, with students presenting us with handmade flower mementos and inviting us to lunch in their mess, where we interacted further. The school's good food, beautiful location, and the warm support of the science and math teachers made the experience truly memorable. <u>Acknowledgment:</u> I sincerely thank the Karnataka State Council for Science and Technology and SFRI for organizing this wonderful event. Apart from school children I also learned how to convey my ideas in most simple terms.
Date of visit	14th December 2024



















KARNATAKA STATE COUNCIL FOR SCIENCE AND TECHNOLOGY

Indian Institute of Science Campus, Bengaluru – 560 012
Website: www.kscst.org.in || Email: office.kscst@iisc.ac.in || Tel: 080-2334 1652

and

SCIENCE FOR RURAL INDIA (IISc Research Scholars Group)

Indian Institute of Science Campus, Bengaluru – 560 012

Outreach program for rural schools by Science for Rural India

Date: 14 Dec - 2024

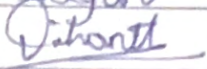
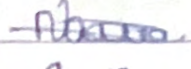
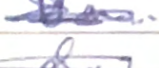
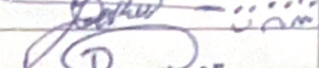
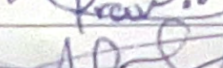
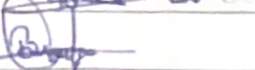
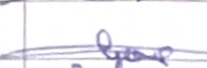
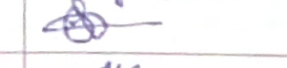
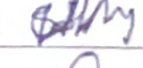
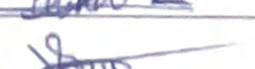
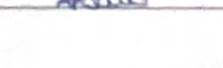
Name of the School / Venue: Morarji Desai Residential School,
H.Gollahally (Bhalramangala)
Ramanagara Tq & Dist-662109

Sl. No.	Name of the Student Participant	Signature
1)	Nandini	Nandini
2)	Deepu K B	Deepu K B
3)	Dnyam	Dnyam
4)	mahalakshmi . v	mahalakshmi . v
5)	Saakha . R	Saakha . R
6)	Pinchana	Pinchana
7)	Jayanthi	Jayanthi
8)	Varsha	Varsha
9)	Bindu	Bindu
10)	Gowthami	Gowthami
11)	Kavitha . k . n	Kavitha . k . n
12)	chinmayi . v	chinmayi . v
13)	Shilpa Shree . J	Shilpa Shree . J
14)	lpektha . G	lpektha . G
15)	m Janani	m Janani
16)	Manisha . S	Manisha . S

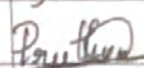
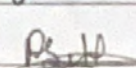
17)	Dhanyatha.S	Dhanyatha.S
18)	Vinishamba	Vinishamba
19)	Meghana.S	Meghana.S
20)	Vaishini.T.P	Vaishini.T.P
21)	Saomya	Saomya
22)	K. Divya	K. Divya
23)	Anjali P.P	Anjali
24)	Chandana	Chandana
25)	Sneha	Sneha
26)	Thanya.P	Thanya
27)	Deeksha.M	Deeksha
28)	Diya.K	Diya.K
29)	Mahadeva.M	Mahadeva.M
30)	Nishil D.S	Nishil D.S
31)	Shorush.H.S	Shorush
32)	Rakesh	Rakesh
33)	Jeevan Gowda.C	Jeevan
34)	Abhishek.N	Abhishek
35)	Rashmi.K	Rashmi
36)	Arun.K	Arun
37)	Likhith Gowda N.G	Likhith
38)	Vidya Sagar.U	Vidya Sagar
39)	Jeevan.M.S	Jeevan
40)	Digant Gowda U.D	Digant
41)	Pragathi T.S	Pragathi
42)	Jeevanth.T	Jeevanth

44)	Kishor. M. S	Devi M. S
45)	Sai Prakash G. B	Sai
46)	Koushik Gowda. D	Koushik. P
47)	G. J Somashekhar	R. J
48)	Ravi. C. M.	Ravi
49)	Shruthi. Ramesh. Nagaraj.	Shruthi
50)	Ajay	Ajay
51)	Praveen. R.	Praveen
52)	Tejvan Gowda. H. R	Tejvan H. R
53)	Tejas. H	Tejas
54)	Somant. G	Somant
55)	Nandana Kumar. P	Nandana ...
56)	Shreyas. M. R	Shreyas M. R
57)	Yogangowda. K. R	Yogangowda
58)	Srujan. H. M.	Srujan
59)	Karthik	Karthik
60)	Lokesh	Lokesh
61)	Deekshith. H. U	Deekshith H. U
62)	Tejasgowda. K. R	Tejas
63)	Supreeth. H. R	Supreeth
64)	Rumant. H. M.	Rumant
65)	Vinod. C	Vinod
66)	Devi. R. K	Devi R. K
67)	Vikas. S	Vikas
	Brahm Gowda. S	Brahm

Pootham. Gowda. S	Pootham. Gowda. S
Preetnam. K.	Preetnam. K.
Likith S.P	Likith
Diganta H.U	Diganta H.U
Lathesha. A	Lathesha. A.
Bhivaraj	Bhivaraj.
Jayanth	Jayanth
AKSHAY. C	AKSHAY.
Nandesh. P. G	Nandesh.
Adithya. m. b	Adithya.
Jayash. K	Jayash. K
Devaram Gowda	Devaram.
Jeevan H.N	Jeevan.
Arun Kumar, K R	Arun Kumar.
chandan J	chandan.
Audikeshava	Audikeshava.
Murugesan. K	Murugesan.
Muniyappa. L.	Muniyappa.
Thamish. K. Gowda	Thamish.
Chandan URS. S	Chandan URS.
Varun Gowda. G	Varun Gowda.
Kiran. Gowda. N	Kiran.
Vishwanth	Vishwanth.
Girishathnam	Girishathnam.
Praveen D.L	Praveen D.L
Lokshmi. M	Lokshmi.

Bharath Gowda	
Madam . m.s	
Lajun	
Jagan	
Diphanth	
Manish.s.	
Naveen kumar. T.G	
Prinivap. DR	
Beerlinga. M	
Gokul. J	
Praveen . CN	
Anthony Jhon.	
Harsha	
Bharath. B c	
Gowtham.P	
Barbosh	
Somnath	
ckisanth S.R	
Keshav	
Kishan kishmon. S	
Dhanush S	
Lalun. Gowda .N	
Chethan .N	
Mang. Is	
chethan.L	
Vasudev	

Chadan. R	Chadan
Preethi	Preethi
lavanya. B. S	lavanya. B. S
Tharushree. J	Tharushree. J
Tanuja. M. K	Tanuja
Mythui. R	Mythui
Radhika. A	Radhika ::
AShwin. S	AShwin
chandana. K. S	chandana
Narannya. B. R	Narannya
Kurthana. G. R.	Kurthana
tharu. T. P	tharu
Navyashree. K. S.	Navyashree. K. S.
Shreedevi	Shreedevi
Kaveri. L	Kaveri. L
Megha. B. madhur	Megha
Bhoomika	Bhoomika
Varishree	Varishree
Revathi. M	Revathi. M ::
Manasa. R	Manasa. R
Sindhu	Sindhu
Kaveri. T. poovar	Kaveri. T. poovar
Jyothi	Jyothi
Kaveri	Kaveri
Tahani. H. D	Tahani
Aishwarya. Kishan. pawan	Aishwarya

Tshwanya	
Roshani	
Priya	
Romya shou.P	
Harshitha	
Lakitha.S	
Spreeathi	
Lekhana.S	
Madesha.K	
Kallanagouda	
Pruthvi. K	
Sidarth Gowda K.V	
Acchuth S. H	

Name and Signature of the IISc Research Volunteers:

Robini Bajaj Rohini Bajaj

Yogesh Thapliyal



Name and Signature of the Science Teacher

B.G. Satvik



Name and Signature of the Headmaster / Vice-Principal
with Seal.


Principal
Morarji Desai Residential School
H. Gollahally (Bhairamangala)
Ramanagara Tq & Dist-562109



Outreach Report/ Feedback

School name	Morarji Desai Residential School
School address and distance from IISc	Atthibele, Anekal, Bengaluru
Team members	1. Atal Singh 2. Swapnadip Repal 3. Rakul MV
Topics covered	1. Introduction to world of Microscopes 2. Optics(Demo of reflection and refraction)
Team members' feedback/experience*	✓ <u>Atal Singh</u> • During the outreach program of SFRI. I Atal Singh, Integrated PhD, Biological Sciences conducted an Educational session at a rural school, focusing on the Fundamentals of microscopy. My aim was to introduce Students to the fascinating world of microscopic science. The Lecture covered the basics of how microscopes work, Explaining key components and their functions to make the Concept accessible for the students. In the lecture I Introduced them with three types of microscopes namely Simple Microscope, Compound Microscope and Electron Microscope. The lecture began with an explanation of the Microscope's structure, detailing essential components like The lenses, light source, and focusing knobs. You discussed How each part functions, illustrating how a microscope Magnifies tiny objects to make them visible to the human Eye. During the demonstration, I gave students hands-on Experience, allowing them to observe microscopic Specimens. As students took turns using the microscope, they Observed various samples, which included Red blood cells And protists amoeba, giving them an exciting glimpse into a Normally unseen world. This practical approach likely Enhanced their understanding and sparked curiosity, making Complex scientific ideas more approachable. My visit Provided valuable exposure to microscopy, encouraging Interest in science among the students. My lecture Highlightes the power of science in understanding the natural World. • In the end I also add career guidance session and Q&A Session. I was really happy to see the excitement on their Faces after learning something new. They enjoy the lecture so Much that the students asked when will I visit them again. They asked me questions about different topics in science And their curiosity to learn different things was unmatched. Thank you SFRI and KSCST for giving me this wonderful Opportunity.

	✓ Swapnadip Repal and Rakul MV As part of the outreach program organized by SFRI, we, Swapnadip Repal and Rakul MV, students of MTech AI, conducted a session to introduce students to the fundamental concepts of Refraction of Light. Our objective was to simplify the topic for better understanding and to provide hands-on learning experiences that would make the subject more engaging and relatable. We began by explaining the concept of refraction, describing how light bends when it transitions between different materials, such as air and glass. To help students visualize this phenomenon, we demonstrated: Refraction using a glass slab: We showed how light changes direction when it passes through a glass slab, emphasizing the concept of lateral shift and the basic laws governing refraction. Refraction using a prism: Using a prism, we demonstrated how light bends as it enters and exits the prism, reinforcing their understanding of angles of incidence and refraction. In addition, we explored the basic principles of reflection using mirrors, highlighting how light behaves when it bounces off reflective surfaces. Students were encouraged to engage in interactive activities, where they experimented with the setup themselves. This hands-on approach allowed students to observe real-life examples of refraction and reflection, helping them connect theoretical knowledge with practical applications. The experience sparked curiosity among the students, and many of them asked insightful questions about how light behaves in different scenarios. To conclude, we held a question-and-answer session, addressing the students' doubts and further deepening their understanding of the topic. We also spoke about potential career paths in science and technology, encouraging them to explore their interests and passions in these fields. It was incredibly rewarding to see the students' excitement and eagerness to learn. Their enthusiasm and engagement made the session a memorable and fulfilling experience for us. We are deeply thankful to SFRI and KSCST for providing us with this opportunity to contribute to the students' learning journey.
Date of visit	21st December 2024





KARNATAKA STATE COUNCIL FOR SCIENCE AND TECHNOLOGY

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and

SCIENCE FOR RURAL INDIA (IISc Research Scholars Group)

Indian Institute of Science Campus, Bengaluru – 560 012

Outreach program for rural schools by Science for Rural India

Date: 21/12/2024

Name of the School / Venue: Morarji Desai Residential School,
Atthibele, Anekal, Bengaluru.

Sl. No.	Name of the Student Participant	Signature
1)	Megha . S	Megha . S
2)	Manasa . S.V	Manasa . S.V
3)	Harshitha . N	Harshitha . N
4)	Gaganashree . E	Gaganashree . E
5)	Manasa . R	Manasa . R
6)	Keerthi . S.D	Keerthi . S.D
7)	Nauktha . U.C	Nauktha . U.C
8)	Amulya . N	Amulya . N
9)	Padmarathi . M	Padmarathi . M
10)	Teertha . S. Raj	Teertha . S. Raj
11)	Chaitra . S	Chaitra
12)	Lakshmi . M	Lakshmi . M
13)	Banji . P	Banji . P
14)	Kushi . Murali	Kushi Murali
15)	Monisha . HM	Monisha . HM
16)	Gourishankari	Gouri

17)	Keexthana R	Keexthana R
18)	Nettuna N.	Nettuna N.
19)	Ganari R.	Ganari R.
20)	Vishala	Vishala
21)	Gaganashree . U	Gaganashree . U
22)	Tamisha varma E.R	Tamisha varma E.R
23)	Aashritha . h	Aashritha . h
24)	Bhagya.	Bhagya
25)	Indu . K.S	Indu . K.S
26)	Chethan . N	Chethan . N
27)	Mohan . D	Mohan
28)	Vishwa . S. Raj	Vishwa . S. Raj
29)	Tushotham . D	Tushotham . D
30)	K. P Manoj	K. P Manoj
31)	Aksh . K	Aksh . K
32)	Bhuvan . G	Bhuvan . G
33)	Shreyas . V. P	Shreyas . V. P
34)	Deekshith . R	Deekshith . R
35)	Tejash . V	Tejash . V
36)	Shradha . R	Shradha . R
37)	HEMANTH . H	Hemanth . H
38)	Ramesh . M	Ramesh . M
39)	Eshwar . K	Eshwar . K
40)	Rohith . R. M	Rohith . R. M
41)	Bangarappa . R . K	Bangarappa . R. K
42)	Maruthi	Maruthi

44)	Dhanush.k	Dhanush.k
45)	Vivek.S.P	Vivek.S.P
46)	Shashikanth. Pabli	Shashikanth. Pabli
47)	Kishan.M.	<u>Kishan.M.</u>
48)	Praveen.PG	Praveen.PG
49)	Varun.J	Varun.J
50)	Akshay Kumar.S	de
51)	Vinay Kumar.R	Rajkumar R.
52)	Monikanta.J.S.	Monika
53)	Sakthiman.B	Sakthi
54)	Darshan.M	Darshan
55)	Dheeraj.S.	Dheeraj
56)	Mahesh.A.Chavan.	MP
57)	Pravalo.R	Pravalo.R
58)	Pravalo.R	Pravalo.R
59)	Manikarjun.T	Manikarjun.T
60)	Gradipnga Monty.R	GR
61)	ADITHYARAS	Adithya
62)	Rathan.M	Rathan.M
63)	Vinay Kumar.B.T	Vinay
64)	Akash.A.Rathod	Akash.A.
65)	Vishal.R	Vishal
66)	YASHWANTH	Yashwanth
67)	Rajonikanth.M.H	Rajonikanth
	Varanth.P	Varanth



Outreach Report/ Feedback

School name	Morarji Desai Residential School
School address and distance from IISc	Morarji Desai Residential School (ST-17), Hunasedoddi, Kootagal Hobli, Ankanahalli (Post), Ramanagara Dt. - 562159
Team members	1. Renu Raman Sahu 2. Yogesh Thapliyal 3. Sanshrey Keshri
Topics covered	1. Force on a current carrying wire in the presence of a magnetic field. 2. Force and Pressure using balloons, nails, water glass and punctured straw
Team members' feedback/experience*	✓ <u>Renu Raman Sahu</u> • Students' response: The students were keenly interested in the demonstrations and were responding well to the questions asked to them based on the topics taught to them. They were answering in unison, confidently when we asked them the questions about the topics we taught them. We taught two batches of students, one batch consisted of 8th class students and the other batch class 9th and 10th. While the students in both batches were good and bright, the class 8th students were much more disciplined as well as good in critical thinking. • Students' behavior: It was a pleasure to teach students. They were very disciplined, well-behaved, respectful, and courteous towards their teachers and others. They made the learning experience enjoyable. Moreover, during the lunch they escorted us to their dining hall and accompanied us for the lunch. We would relish such wholesome moments and wonderful memories.

	• Teachers: The teachers and the principal were caring for the students. The students respected their teachers and were obedient and disciplined in their presence. They also attended the demonstration sessions and assisted us during the demonstrations. The principal of the school and all other staff welcomed us wholeheartedly and served us tea in the staff room. • Infrastructure: This school has good infrastructure, and classrooms. It also has a playground. They have a science lab where they could do the practicals. • The male: female ratio: We could see only one female teacher in the school who was their science teacher. • The logistics: The school was about 90km away from IISc and it took us two hours to reach the school by cab. We really appreciate the transportation arrangement by the Karnataka state government. Everything went as planned, we could reach on time to the venue and the demonstrations was over within scheduled time. The return was also smooth. The driver Avinash is a very nice and friendly person the. The journey felt so wonderful with him. • The Impact: The students after understanding the concept taught to them were curious and gathered around the demonstration and tried themselves. We could see the excitement of the children on their faces as the demonstrations started to work. The live demonstration model of teaching, where they directly see for themselves how the concepts are applied, is much more effective than the usual classroom teaching. The pictures attached herewith this report depict how engaged the students were in learning and understanding
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	the concepts. • Our experience: Amazing. We are truly grateful for providing us with this opportunity to interact with children and learn about education in rural Karnataka. We felt happy that the students were able to understand what we were trying to explain them. They could relate the demonstration with the theory we taught them. The students were not only bright, but also have dreams to excel in future. We wish the students all the very best. This outreach have inspired us to conduct more such outreaches and kindle an interest towards science in students. • Room for improvement: The school as such was well managed and have all the basic facilities. We think that there is a need of more science teachers, each for physics chemistry and biology. Currently only one teacher manages the physics, chemistry and the biology of all the classes from class 6th to class 10th. ✓ <u>Yogesh Thapliyal</u> • Topics Covered: I started to build some basics by introducing the concept of force and pressure. Demonstrated the concept of pressure using a balloon and number of pins. I wanted to show them how pressure difference can cause liquids to flow so to demonstrate this, I asked the students to try drinking water from a glass using a regular straw first and then using a punctured straw. They found it much harder to drink with the punctured straw, and then I explained to them why this was happening. I also demonstrated pressure volume relation with the help of a syringe pump.
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	With the balloon I also demonstrated newton's 3rd law and told them how this principle is used to generate upthrust in rockets. At last, I talked a little bit about Newton's law of gravitation. I also described the difference between mass and weight and helped them understand that the air around us also has some mass, and hence, it exerts pressure, which we call atmospheric pressure. Students' Response and Behavior: The students, divided into two groups—8th and 9-10th—were excited and curious to have us on campus. Initially shy, they quickly warmed up and actively participated in the experiments. By the end, they were asking genuinely nice questions related to the topics we presented and beyond that also. The session was impactful, with students inviting us to lunch in their mess, where we interacted further. The school's healthy food, beautiful location, and the warm support of the science ,math and english teachers made the experience truly memorable. ✓ <u>Sanshrey</u>
Date of visit	21st December 2024



With the students and the science teacher after the class



Sanshrey demonstrating the students the working model of the setup “force on the current carrying conductor in presence of magnetic field”



Raman teaching the students



Students applying the “Right hand thumb rule” to determine the direction of magnetic field due to a current carrying conductor.



Students are trying to suck water from punctured straw.



At the end of class.

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and

SCIENCE FOR RURAL INDIA (IISc Research Scholars Group)

Indian Institute of Science Campus, Bengaluru – 560 012

Outreach program for rural schools by Science for Rural India

Date: 21st Dec 2024

Name of the School / Venue: Morarji Desai Residential School (ST-17), Hunasedoddi,
Kootagol Hobli, Ankanahalli (Post), Ramanagara Dt. - 562159

Sl. No.	Name of the Student Participant	Signature
1)	Aishwarya	Aishwarya
2)	Ankitha.A	Ankitha.A
3)	Bhavath.	Bhavath.
4)	Basavaraj	Basavaraj
5)	Chaitra	Chaitra
6)	Chandan Gowda.P	Chandan Gowda.P
7)	Chandan.C	Chandan.C
8)	Chethan.T.S	Chethan.T.S
9)	Chiranth.B.K	Chiranth.B.K
10)	Dhanush Gowda.D	Dhanush.D
11)	Deeksha	Deeksha C.A
12)	Deekshith	Deekshith.R.
13)	Deekshith Gowda.D.H	Deekshith D.H
14)	Devika	Devika
15)	Digant Gowda.D.G	Digant D.G.

16)	Gowramma	Gowramma
17)	Teeran. H	Teeran. H
18)	Teeritha. U	Teeritha. U
19)	Tanesh	Tanesh
20)	kavitha. A.B	Kavitha. A.B
21)	kusuma	
22)	Lakshmidewi	Lakshmidewi
23)	Likith Gowda	Lak
24)	Lohith. G	Lohith. G
25)	madesh. M.K	Madesh
26)	manasa	Manasa
27)	monika. T.K	Monika T.K
28)	monish Gowda. B.M	Monish B.M
29)	Navya Shree. S	Navya Shree. S
30)	pavithra	Pavithra
31)	poornika. N.P	Poornika N.P
32)	prajwal. R	
33)	praveen	Praveen ..
34)	puneeth. R	Puneeth
35)	Ramya. T.R	Ramya. T.R
36)	Ravi Kumar	Ravikumar
37)	Sanjan. S	Sanjan S
38)	Sanket Rathod	
39)	Shashank. G	Shashank
40)	Shwetha	Shwetha
41)	Spoorshi	Spoorshi

42)	Tharsh . N.S	Tharsh
43)	Tushar. G.m	<u>Tushar</u>
44)	varshith Gowda	Varshith
45)	Vinutha	Vinutha.
46)	Yashas K	Yash
47)	yogesh. C.	Yogesh
48)	Amranda Gowda. Y.R	Amranda Gowda Y.R
49)	Chandam. Y.K	Chandam Y.K
50)	Chandrakala	Chandrakala
51)	Charan Gowda .S	Charan S
52)	Charidha. R	Charu
53)	Chethan Gowda	Chethan R.
54)	Chethan. R	Chethan. R
55)	Chiranth. P	Chiranth. P
56)	Dasham Gowda	
57)	Deekshith Gowda. A	Deekshith
58)	Deepika. R	Deepika
59)	Dhakeshith. R. Gowda	Dhakeshith
60)	Dhanush Gowda	Dhanush
61)	Dinesh	Dinesh
62)	Geetha. R	Geetha. R
63)	Harshikaashree. K.T	Harshika.
64)	Harshini	Harshini
65)	Hema	Hema...
66)	Jeevan. S	
67)	Jayakeerthi. P.	Jaya

68	madam Gowda	
69	mahalakshmi	Mahalakshmi, B.S
70	mohan. H	Mohan. H
71	mohitha. H	Mohi
72	monisha. G	Monisha. G
73	nagesh. H. V	Nagesh
74	parvan. S	Parvan. S
75	poornith Gowda. C	Poornith
76	prajwal. M.	Prajwal. M.
77	Ravish Gowda. K. P	Ravish. K.P
78	Sahana. R	Sahana
79	Sahana. M. Shiralli	Sahana. M
80	Sandhya	Sandhya
81	Sangeetha Hanumantappa	Sangeetha
82	Shashank. M. S	Shashank. M. S
83	Shashank. S	Shashank. S
84	Shravanth. A. S	Shravanth. A. S
85	Shreyas. S	Shreyas. S
86	TETU basavaraj Dambal.	TETU
87	Tilak Gowda. K. P	Tilak
88	viJaya kumar	Vijay
89	urushab. v. Gowda	Urushab. V. Gowda
90	yashas	Yashas
91	yashwanth Gowda. A. L	Yashwanth. A. L
92	yashwanth. S.	
93	Amardh Gowda. K. R.	

94	Ajay	Ajay
95	Akshatha G	Akshatha G.
96	Ankitha . B.	Ankitha . B.
97	Brunda . K . R	Brunda . K . R
98	Charitha . A	Charitha . A
99	Chethan Kumar . G	Chethan Kumar . G
100	Chethan Gowda . H . B	Chethan Gowda . H . B
101	Chiranth Gowda . K . L	Chiranth Gowda . K . L
102	Darshan . P	Darshan . P
103	Deekshith . S	Deekshith . S
104	Dhanush Gowda . D	Dhanush Gowda . D
105	Dhanushree	Dhanushree
106	Dore	Dore . A
107	Dushyant Gowda	Dushyant
108	Gagan . B . K	Gagan . B . K
109	Gayathri . A . G	Gayathri . A . G
110	Hemachandra	Hemachandra .
111	Hrithvi . A . R	Hrithvi . A . R
112	Jeevan . M	Jeevan . M
113	Jeevan . T	Jeevan . T . W
114	Jeevan . T . M	Jeevan . T . M
115	K . S . , Keshav Gowda	K . S . Keshav
116	Kamalesh . R . V	Kamalesh . R . V
117	Kishan Gowda . N	Kishan
118	Koushik . S	Koushik . S
119	Kruthika	Kruthika

120	kushal	Kushal
121	Lakshmi. D	Lakshmi - D.
122	Lingaraj	Lingaraj
123	Lohitha	Lohitha .i
124	mahadevi	Mahadevi ^o
125	maruthi Gowda	Maruthigowda
126	Nandini. H	Nandini - H
127	pruthvik Gowda	Pruthviks
128	pruthviraj	Pruthvi Raj
129	purnithraj	Purneeth - Raj
130	purvitha. A.L	Poorvitha A.L
131	Rohan Gowda	Rohan Gowda. M.
132	R. Gagan	Gagan
133	Shalini. v	
134	Shashikumar	SS
135	Shreya	Shreyas
136	Shreyas Gowda. R	Shreyas Gowda. R.
137	Suhas	Suhask
138	Thrishala	Thrishala
139	Vijay Kumar. B.N	Vijay Kumar B.N
140	Vishal Gowda. M	Vishal Gowda. M.
141	Vishwas. T.S	Vishwas T.S.
142	Yashwanth	Yashwanth
143		
144		
145		



Outreach Report/ Feedback

School name	Morarji Desai Residential School
School address and distance from IISc	Morarji Desai Residential School (SC-20), Mayaganahalli, Mayaganahalli post, Ramanagara taluk 562128.
Team members	1. Renu Raman Sahu 2. Yogesh Thapliyal 3. Ashutosh Panchal 4. Rupika
Topics covered	1. Force on a current carrying wire in the presence of a magnetic field. 2. Magnetic Field lines with iron fillings 3. Electromagnet using iron nail and copper wire. 4. Force and Pressure using balloons, nails, water glass and punctured straw
Team members' feedback/experience*	✓ <u>Renu Raman Sahu</u> • Students' response: The students demonstrated a strong interest in the demonstrations and responded positively to the questions related to the topics covered. They answered confidently and in unison when prompted. The session included two groups of students: one comprising 8th grade students and the other consisting of 9th and 10th grade students. While students in both groups were engaged and showed considerable aptitude, the 8th grade students stood out for their discipline and strong critical thinking abilities. • Students' behavior: It was a rewarding experience to teach the students, as they exhibited high levels of discipline, respect, and courtesy towards both their teachers and peers. Their positive behavior contributed to making the learning experience enjoyable.

	Additionally, during lunch, the students graciously escorted us to their dining hall and accompanied us throughout the meal. These thoughtful gestures created memorable moments that we will truly cherish. • Teachers: The teachers and principal demonstrated genuine care for the students, who showed great respect, obedience, and discipline in their presence. The students actively participated in the demonstration sessions and provided valuable assistance during the demonstrations. The principal and the entire staff extended a warm welcome, offering us tea in the staff room, which added to the overall positive experience. • Infrastructure: The school is equipped with good infrastructure, including well-maintained classrooms and a playground. Additionally, it features a science laboratory where students can conduct practical experiments. • The male: female ratio: The male female ratio was almost 1. • The logistics: The school was located approximately 60 km from IISc, and the journey took about one hour by cab. We greatly appreciate the transportation arrangements made by the Karnataka state government. Everything proceeded as planned, allowing us to arrive on time and complete the demonstrations within the scheduled time. The return journey was equally smooth. The driver, was courteous and friendly, making the trip an enjoyable experience. • The Impact: After grasping the concepts presented, the students showed great curiosity and eagerly gathered around the demonstration to try it themselves. Their
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	excitement was evident as they witnessed the demonstrations in action. The hands-on, live demonstration model of teaching, where students directly observe the application of concepts, proved to be far more effective than traditional classroom instruction. The images attached to this report highlight the students' engagement and their active participation in learning and understanding the concepts. • Our experience: We are grateful for the opportunity to interact with the students and gain insights into education in rural Karnataka. It was fulfilling to see that the students were able to comprehend the concepts we explained and connect the demonstrations with the theoretical knowledge we taught. The students not only displayed intelligence but also harbored aspirations to excel in the future. We wish them all the best in their endeavors. This outreach has inspired us to conduct more such initiatives, with the goal of fostering a greater interest in science among students. • • Room for improvement: The school as such was well managed and have all the basic facilities. We think that there is a need of more science teachers, each for physics chemistry and biology. ✓ <u>Yogesh Thapliyal</u> • Topics Covered: I started to build some basics by introducing the concept of force and pressure. Demonstrated the concept of pressure using a balloon and number of pins. I wanted to show them how pressure difference can cause liquids to flow so to demonstrate this, I asked the students to try drinking water from a glass using a regular straw first and then using a punctured straw. They found it much harder to drink with the punctured straw, and then I explained to them why this was happening.
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	I also demonstrated pressure volume relation with the help of a syringe pump. With the balloon I also demonstrated newton's 3rd law and told them how this principle is used to generate upthrust in rockets. At last, I talked a little bit about Newton's law of gravitation. I also described the difference between mass and weight and helped them understand that the air around us also has some mass, and hence, it exerts pressure, which we call atmospheric pressure. • Students' Response and Behavior: The students, divided into two groups—8th and 9-10th—were excited and curious to have us on campus. Initially shy, they quickly warmed up and actively participated in the experiments. By the end, they were asking genuinely nice questions related to the topics we presented and beyond that also. The session was impactful, with students inviting us to lunch in their mess, where we interacted further. The school's healthy food, beautiful location, and the warm support of the science ,math and english teachers made the experience truly memorable. ✓ <u>Ashutosh Panchal</u> ✓ <u>Rupika</u>
Date of visit	04th January 2025



Figure 1: SFRI volunteers with the school teachers.



Figure 2: SFRI volunteers with students.



Figure 3: Yogesh teaching students about the concepts in pressure and force.



Figure 4: Raman teaching during the theory session. Two student participants explaining the rest of the students in Kannada.



Figure 5: Ashutosh demonstrating electromagnets to the students.



Figure 6: Ashutosh showing the example of ceiling fan to show the application of force on current carrying conductor.



Figure 6: Ashutosh showing the effect of force on current carrying conductor.



Figure 7: Ashutosh showing the magnetic field lines around a permanent magnet using iron fillings.



Figure 8: Ashutosh explaining the physics concepts.



Figure 9: Rupika and Yogesh interacting with the students.



Figure 10: Rupika demonstrating an electromagnet to the students.

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and

SCIENCE FOR RURAL INDIA (IISc Research Scholars Group)

Indian Institute of Science Campus, Bengaluru – 560 012

Outreach program for rural schools by Science for Rural India

Date: 4/1/2025

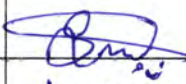
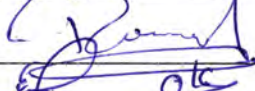
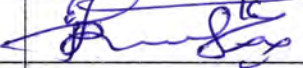
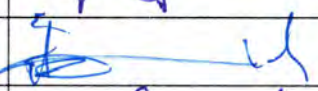
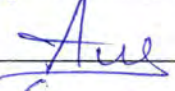
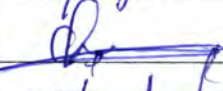
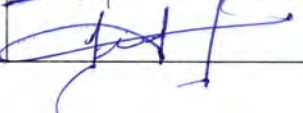
Name of the School / Venue: Morarji Desai Residential School
[Mayaganaballi]

Sl. No.	Name of the Student Participant	Signature
1)	Poorvika.C	Poorvika.C
2)	Pavani.B.S	Pavani.B.S
3)	Valliyamma	Valliyamma
4)	Ranya G.R.	Ranya G.R.
5)	Sneha.	Sneha.
6)	Spandana.M	Spandana.M
7)	Deekshitha	Deekshitha
8)	Laranya	Laranya
9)	Priyanka	Priyanka
10)	Pushpalatha	Pushpalatha
11)	Thejasree	Thejasree
12)	Shreya	Shreya
13)	Varshini.	Varshini.
14)	Gunashree.P	Gunashree.P
15)	Pareethi.R	Pareethi.R.

16)	Srujana	Srujana.V
17)	Varsha	Varsha..
18)	Tejaswini . S	Tejaswini
19)	Meha	Meha
20)	Rachana.	Rachana..
21)	Sampreeti. G	Sampreeti
22)	Dashan Gowda (C.P.)	Dashan
23)	Bhaskar Gowda	Bhaskar
24)	Madan P	Madan P
25)	Chitham. S	Chitham. S
26)	Purnima M Gowda	Purnima M Gowda
27)	Kuphal Kumar. #	Kuphal Kumar
28)	Surya Prakash. K	Surya Prakash. K
29)	Prashanth. V	Prashanth. V
30)	Uthmesh. K	Uthmesh. K
31)	Uday Gowda. P	Uday
32)	Manoj. K	Manoj. K
33)	Praswal. H	Praswal
34)	Gagan. M	Gagan. M
35)	Ponith Kumar. A	Ponith Kumar. A
36)	Vikas. B. B	Vikas. B. B
37)	Gowtham.	Gowtham.
38)	Surya Shetty. V	Surya Shetty. V
39)	Nishanth. Gowda. P	Nishanth
40)	Parthiv Gowda	Parthiv
41)	Gagan. H. U	Gagan

42)	LAKSHMI putha	LP
43)	Guru gowda.A.V	GG
44)	VAISHAK.N	VA All..
45)	VASANTH.S.B	Narant
46)	BHARATH GOWDA H.L	Bharath
47)	Niranjand	Nir
48)	Chinaseevi D.S	Chin
49)	Lalithesh . S	Lalithesh
50)	Lokesh.R	Lokesh
51)	Shreyas. SR	SR
52)	Rishik Ti	R
53)	Jayatha . S	Jay
54)	Kushal . AH	K H
55)	Jagan Mohan.R.R	Jagga
56)	gagan kumar . R	go
57)	Bharath kumar. H.S	B
58)	Faran.A	F
59)	Punith. V	P
60)	Yashwanth Gowda m.R	Yash
61)	Preetham. C.N	P
62)	Likith Goutham	L
63)	Nikhil. S.B	N
64)	Chethan Aradya.V	Ch
65)	Pushan gowda. C.V	P
66)	Shraddha.S	S
67)	TEerucha	T

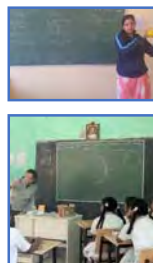
68	Prajwal Ravi Kumar	Prajwal R. ²⁴
69	Davithra	Sumithra
70	Thanushree	Sumithra
71	Jeevitha	Sumithra
72	Bindushree S	Bindu S
73	Harshitha . S. Gowda.	Harshitha S. Gowda
74	Raksha B.	Raksha B.
75	Jhanmayi R	Jhanmayi R
76	Bhuvaneshwari G	Bhuvaneshwari G
77	Durga	Durga
78	Vidyashree	Vidyashree
79	Koushalya	Koushalya
80	Sukrutha	Sukrutha
81	Premalatha	Premalatha
82	Shivarajini	Shivarajini
83	Shraddha	Shraddha
84	Sinchana . p	Sinchana . p
85	Varshini . p	Varshini . p
86	Prarthana	Prarthana
87	Bhanya	Bhanya
88	Varshini D.N	Varshini D.N
89	Lakshmi . S	Lakshmi . S
90	Sevanti, M. S	Sevanti, M. S
91	Saraswathi . S	Saraswathi . S
92	Kavana . P	Kavana . P
93	Vismitha	Vismitha

94.	Shruthakshmi	
95	Lohith K B	Lohith K. B
96	Darshan. B	Darshan. B
97	Tanmay. H	Tanmay. H
98.	Karthik. K. G.	KARTHIK. K. G
99.	Gowtham. G	Gowtham. G
100	Jeeshith.	Jeeshith.
101	Gagan. M	
102	Jhanesh T. S	
103	Priem. A	
104	Preetham. K	
105	Karthik Rafe Gowda	
106	Varun Gowda B	Varun
107	Vaibhan	Vaibhan
108	Abhishek	
109	Kushal. K. T	Kushal. K. T
110.	yathish	
111	Likith Gowda B. S	
112	Nishanth. G	
113	Kushal. H	Kushal. H
114	Gowtham. A. V	
115	Devendra	
116	Adarsh	
117	Gagan. S	Gagan
118	Chandan. M	
119	Jeevan. S	



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Glimpses of the Student Science Outreach Programme conducted by IISc Research Scholars and organised by the Karnataka State Council for Science and Technology (KSCST) with the Support of NCSTC, Department of Science and Technology, Government of India and Karnataka Residential Educational Institutions Society, Department of Social Welfare, Government of Karnataka



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Glimpses of the Student Science Outreach Programme conducted by IISc Research Scholars and organised by the Karnataka State Council for Science and Technology (KSCST) with the Support of NCSTC, Department of Science and Technology, Government of India and Karnataka Residential Educational Institutions Society, Department of Social Welfare, Government of Karnataka

