

IMPACT REPORT

ROTARY IT INNOVATION LAB AND CAREER FOUNDATION CLASSES

Report Prepared by **Rotary Club Of Bombay**
FY 2024-25



PROJECT ABSTRACT

Vision

The Rotary Club of Bombay aims to expand the reach of these Innovation Labs, enabling more students to explore, innovate, and prepare for a technologically advanced future. By nurturing curiosity and creativity, Rotary Club of Bombay seeks to equip children in rural areas with the tools to become tomorrow's leaders and problem-solvers.

Hurdle:

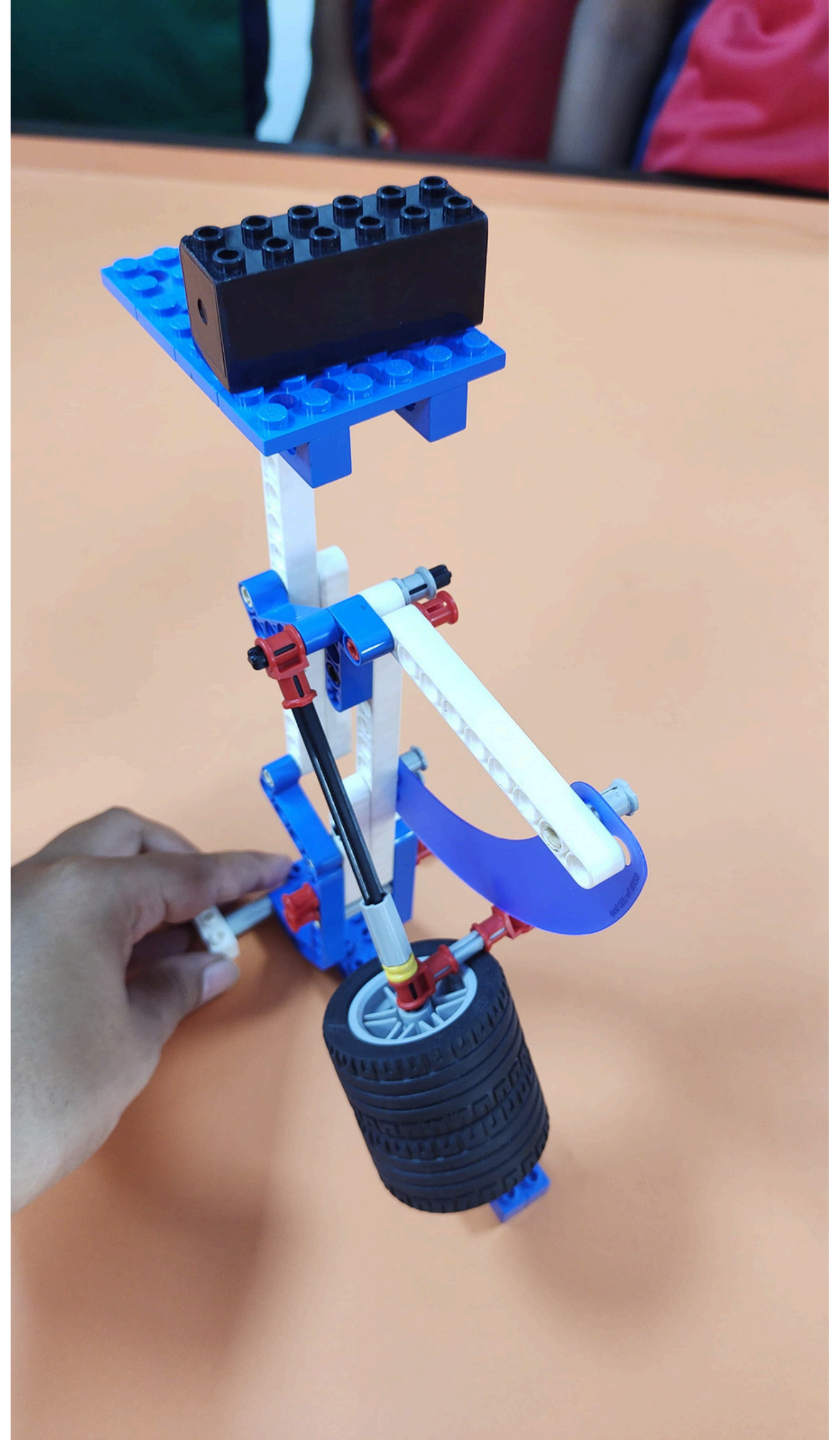
Access to advanced technology and modern learning methods is limited in underserved areas like Palghar and Wada, leaving children unequipped for the demands of a rapidly evolving world.

Course Structure:

The Lab offers batches that run for 3 months (originally 8 weeks), with students attending sessions for 2 hours a day, once a week. There are three slots per day (7:30 am to 9:30 am, 10 am to 12 noon, and 12:30 pm to 2:30 pm), six days a week (Mondays to Saturdays). Out of the possible 18 batches per week, only 15 are pre-scheduled. Spare batch timings are utilized for students needing extra support, clarifying concepts with staff, experimenting with their learnings, working on projects, or catching up on missed lessons due to various reasons such as illness, extra classes, exams, or travel. Students work in pairs, with each batch comprising 24 students.

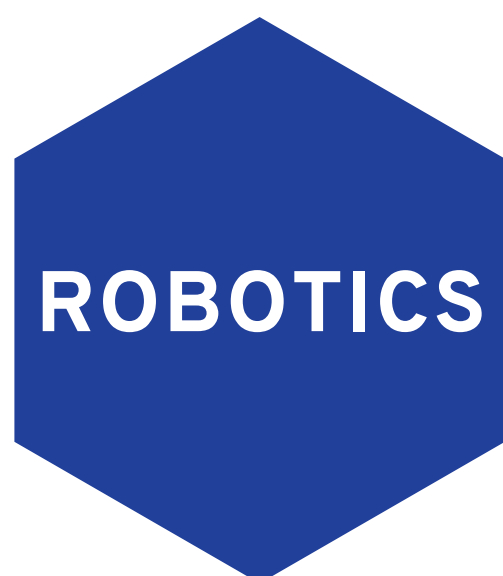
Infrastructure

Students are arranged in pairs at 12 custom-made tables equipped with electrical socket panels. The tables are positioned in a "U" shape, providing students with a clear view of the faculty, whiteboard, and projector display at the front of the room. Three cupboards located at the rear of the room hold learning resources such as laptops, Grok Learning's customized "Grok IoT Kits", advanced Lego block sets, and guidebooks. Additional capital expenditures include a laptop for the Lab staff, projector, Wi-Fi unit, and two 3D printing machines.



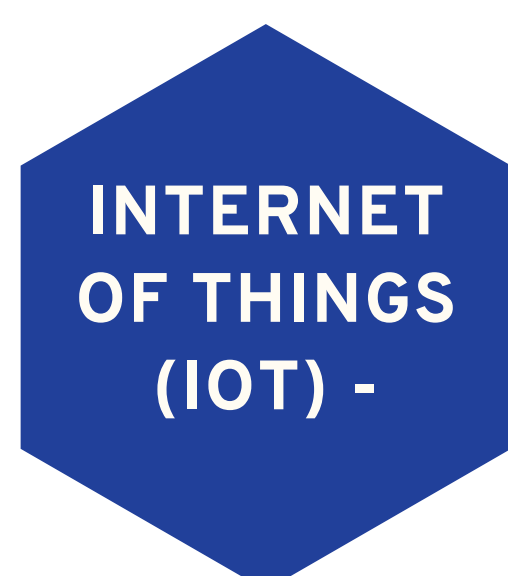
SYLLABUS

SUBJECT #1



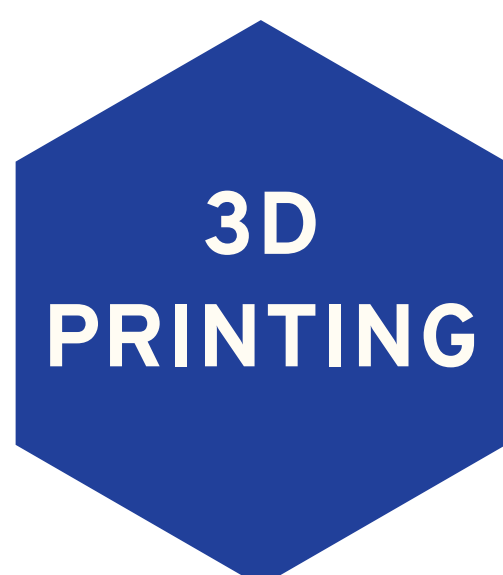
Basics of gears and levers and their applications. Relates to topics like pneumatics and renewable energy that are taught in the regular school syllabus. Uses an advanced set of Lego blocks with a corresponding instruction manual. Usually taught at entry level, to Grade VII students. Student applying concepts of gears learnt at the IT Lab to create a vehicle that travels at 3 speeds and in reverse.

SUBJECT #2



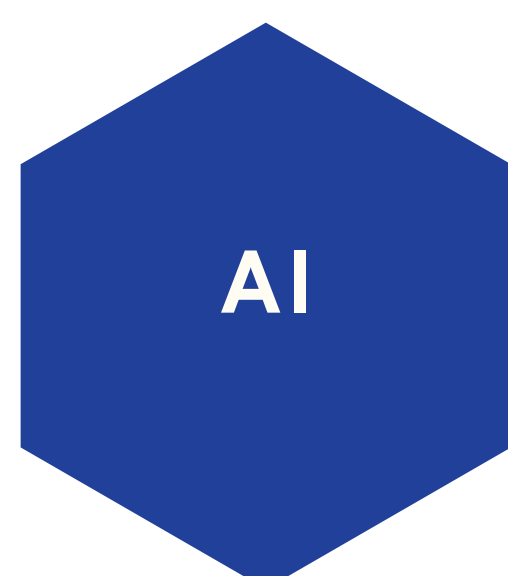
Involves use of a customized “Grok IoT Kit” (including various sensors) and writing simple programming codes for link to laptops/ mobile phones. Usually taught after basics of Robotics, to Grade VIII students. Students using motion sensors to indicate arrival of a visitor at the front door by turning on a door light and sending notification to the home occupant’s mobile phone.

SUBJECT #3



Envisioning a structure (including by creating models on graph paper or with cardboard), designing corresponding 3D models on Imaginatix software then creating the product using a 3D printer. The Tech team at Grok Learning constantly monitors usage of the platform to update programming codes and basic shapes that are frequently used to their main repository/ library to make it accessible to all users. Usually taught to senior students (Grade IX), who can then draw upon learning from the previous courses.

SUBJECT #4



Artificial Intelligence (AI) enables computers to think and make decisions like humans. It powers applications like voice assistants, self-driving cars, and chatbots. AI helps in recognizing speech, understanding images, and making smart recommendations. Generative AI, can create new content like images, music, and text based on patterns it has learned. Examples include AI-generated art, chatbots like ChatGPT, and AI-powered video creation.

SUBJECT #5



Data Science (DS) is the study of data to find useful insights. It involves collecting, analyzing, and visualizing data to make better decisions. DS is used in fields like weather prediction, healthcare, and business analytics.

SUMMARY OF ONGOING LABS

The IT Innovation Laboratories established in Palghar district by the Rotary Club of Bombay are specifically tailored to cater to the educational needs of underprivileged high school and college students from rural and tribal backgrounds. These labs aim to provide practical exposure to 3D, IoT, Robotics, AI, and Data Science, enhancing students' Applied Learning & Technology and Critical Thinking skills to prepare them for future employment opportunities. Through a meticulously curated curriculum and dedicated support from lab staff, students' self-confidence is significantly boosted.



ACHIEVEMENT

The Rotary Club of Bombay (RCB) established state-of-the-art Innovation Laboratories at ST Kadam School, Palghar, P.J. High School Wada, K L Ponda High School Dahanu and S.D. Vartak School, Boisar providing cloud-based learning and practical applications in IoT and 3D Printing. These labs are redefining how students interact with technology and solve real-world problems.

Since January 2022, over 8300 children have benefited from this innovative program.

IMPACT IN NUMBERS

Sr. No	IT Innovation Labs	Subjects	Sessions	Batches	Students Covered Subject-wise	Total students	Total Duration
1	ST Kadam School, Palghar	Robotics	16	55	1200	5472	27th Jan 2022 to 30th Dec 2025
		3D Printing		106	2448		
		IOT		80	1824		
2	P.J. High School, Wada	Robotics	6	30	726	1810	25th March 2023 to Jan 2026
		3D Printing		36	585		
		IOT		21	499		
3	S.D. Vartak School, Boisar	Robotics	2	12	264	748	February 22, 2025 to July 2, 2025
		3D Printing		12	264		
		IOT		10	220		
4	K.L. Ponda High School, Dahanu	Robotics	1	5	120	360	26-Sep-25 to Jan 2026
		3D Printing		5	120		
		IOT		5	120		

VIGYASA 2025 – A PROUD MOMENT FOR OUR INNOVATION LABS!



We are delighted to share that students from our Innovation Labs in Palghar, Boisar, Dahanu, and Wada participated with great enthusiasm in the National-Level AI & IoT Innovation Competition – “Vigyasa 2025”, held on 20th November 2025 at KES' Shri T. P. Bhatia College of Science, Kandivali (W), Mumbai.

Focused on Climate Sustainability and Environmental Problem-Solving, the competition encouraged students to design AI & IoT-based solutions. Students from Std. 8th–10th showcased impressive creativity through well-built prototypes and confident presentations.

Among 25 exceptional teams from across India, our Innovation Labs proudly represented 6 strong teams from Boisar, Palghar, Wada, and Dahanu. These young innovators stood out with their bold ideas, thoughtful execution, and commitment to solving real-world environmental challenges.

K. L. Ponda High School, Dahanu

Project: Smart River Plastic Waste Segregation & Management System

The team impressed the judges with a working model that tackled river pollution head-on – earning them a well-deserved 2nd Runner-Up position!

Students: Divy, Vedant, Aksha.

Teacher: Richa Jha and Dipali Jadhav



Rising Star Award – A Shining Moment for Palghar (Semi-English)

JVSS S. T. Kadam School, Palghar

Project: Smart Helmet for Coal Mine Worker Safety

Innovative, impactful, and brilliantly presented – this safety-focused IoT project earned the team the Rising Star Award, recognizing them as emerging trailblazers.

Students: Daksh, Gunjan, Pratigya, Gargi

Teacher: Rajashri and Khushi



WINNING HIGHLIGHTS

Rising Star Award – A Shining Moment for Boisar (Hindi Medium)

Dr. S. D. Vartak Vidyalaya, Boisar

Project: Smart Precision Farming System

A practical and timely solution for farmers, this project showcased how IoT can make agriculture smarter and more sustainable.

Students: Priya, Ankit, Rajkiran

Teacher: Devashish Y. Narkhede and Khushboo Lokhande



Participation Certificates – Innovators Who Made Us Proud

S. T. Kadam Vidyalaya, Palghar

Project: Smart Landslide Detection & Early Warning System

A well-thought-out disaster alert system that highlighted the students' problem-solving abilities and technical skills.

Students: Suraj, Jignesh, Priyanshi, Alia

Teacher: Rajashri and Khushi



Participation Certificates – Innovators Who Made Us Proud

Project: Smart Forest Conservation System

A thoughtful attempt at protecting our forests using technology.

Students: Kanad, Maharsh, Aditya

Teachers: Shyamli Jadhav and Swara



Overall Summary

Together, they tackled real-world problems such as:

- River waste
- Water pollution
- Farming challenges
- Worker safety
- Landslides
- Forest conservation

Each project reflected curiosity, teamwork, creativity, and solid technical understanding.

A Big Congratulations!

Our students proved that innovation has no age and that with the right guidance, young minds can create solutions that matter.

We are incredibly proud of their dedication and the way they represented our Innovation Labs on a national platform.

SUCCESS STORIES

The IT Innovation Labs Committee are pleased to inform you that the students of Jeevan Vikas Shikshan Sanstha's Shree S. T. Kadam Vidyalaya, Palghar proudly participated in the Build Ideathon – Viksit Bharat National Level Competition.

Students from Class 9 – Suraj Athare, Daksh Prajapati, Naitik Patil, Pratigya Prajapati, and Gargi Shelwale – presented their innovative IoT-based project titled “Smart Eco Dustbin.”

The project demonstrated a smart waste management system designed to promote cleanliness and environmental sustainability.

The dustbins used for demonstration were 3D-printed prototypes developed by the students themselves.

We are delighted to share that our students successfully presented their project on this national-level platform and were awarded a Certificate of Achievement for the successful completion of their project.

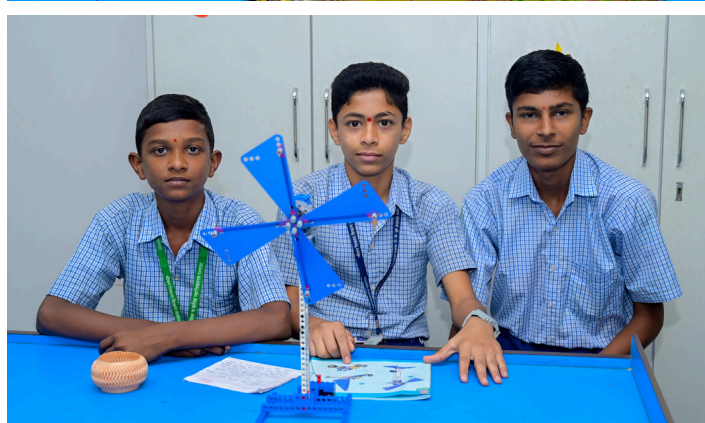
We take immense pride in their creativity, teamwork, and dedication, which reflect the spirit of innovation encouraged by our institution.



EXPESE DETAILS

IT Innovation Lab & Career Foundation Course Expense during 01.07.24 to 30.06.25

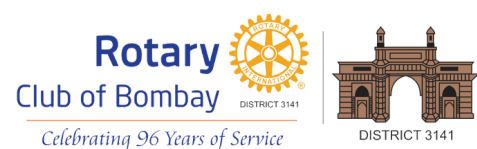
Sr. No.	School Names	IT Lab/CFLC	Amount Spent	
			Capex	Opex
1	S.D. Vartak School, Boisar	Bhoisar ITIL	43,97760.00	3,97,377.00
		Bhoisar CFLC	1,41,104.00	1,10,000.00
		A	45,38,864.00	5,07,377.00
2	K.L. Ponda High School, Dahanu	Dahanu ITIL	17,27,087.00	0
		Dahanu CFLC	0	0
		B	17,27,087.00	0
3	ST Kadam School, Palghar	Palghar ITIL	11,55,960.00	93,500.00
		Palghar CFLC	0	17,11,253.00
		C	11,55,960.00	18,04,753.00
4	P.J. High School, Wada	Wada CFLC	0	12,00,000.00
		D	0	12,00,000.00
Total Expense (A+B+C+D)			74,21,911.00	35,12,130.00



Donations are eligible for deduction under Sec 80G of the Income Tax Act, 1961. Companies may send in their CSR contributions too. We shall provide the requisite certificate, reports and documents in this regards.

Donations may be made by:
 Cheque favouring : "Rotary Club Bombay Charities Trust No.3"
 OR
 NEFT Bank Transfer to:
 Name of Account: Rotary Club Bombay Charities Trust No.3
 Savings Account No: 0011000043340
 Name of Bank: HDFC Bank, Nariman Point Branch
 IFSC Code: HDFC0000001

We shall be very grateful for your support towards this very worthy cause and look forward to your generous donation and thank you in anticipation thereof.



RCB Office Address:

97-B, Mittal Towers, 'B' Wing, 9th Floor, Free Press Journal Road, Nariman Point, Mumbai – 400021.
 Tel No. 022 - 48024661
 Mobile No. 9769140141/ 8291925423

@rcb1929

www.rotaryclubofbombay.org

rcb1929

@RotaryClubOfBombay

contact@rotaryclubofbombay.org