

## **ATL activities on STEM Promotion Week (14th–18th July 2025)**

### **Report on the Inaugural Day of STEM Innovation Week at KV DRDO**

The STEM Innovation Week at Kendriya Vidyalaya DRDO commenced with great enthusiasm and participation from students and staff. The day began with a special introduction to the **Atal Tinkering Lab (ATL)** during the morning assembly, led by the students of Class VIII.

#### **ATL Inception Presentation – Class VIII**

The session highlighted the inception of ATL at KV DRDO, its establishment under the **Atal Innovation Mission (AIM)**, and the core objectives of the lab. Students gave a brief overview of the planned activities for the academic year and the various innovative projects undertaken at ATL so far. This helped create awareness among students about the purpose and potential of ATL in fostering creativity and problem-solving skills.

#### **Session on 3D Printing – Loka Barani, Class XI**

Following the introduction, **Loka Barani of Class XI** conducted a detailed session on the working of the **Pratham Mini 3D Printer**. The session included a hands-on explanation of the 3D printing process, from model design to final printing. The demonstration was engaging and provided valuable insight into how 3D printing is revolutionizing rapid prototyping in various industries.

#### **Presentation on Location-Aware Security System – Krishnadev, Class VIII**

The next segment featured **Krishnadev of Class VIII**, who presented his innovative project titled "**Location-Aware Security System for the Visually Impaired.**" He explained the concept behind the project, its applications, and also provided a live demonstration, which impressed the audience and showcased how technology can be harnessed for social good.

#### **Interactive Quiz for the Audience**

To ensure active participation, an interactive **quiz** was conducted for the audience, focusing on concepts related to innovation, ATL, and general STEM knowledge. The quiz was well-received and helped reinforce the learning from the sessions.

#### **Conclusion**

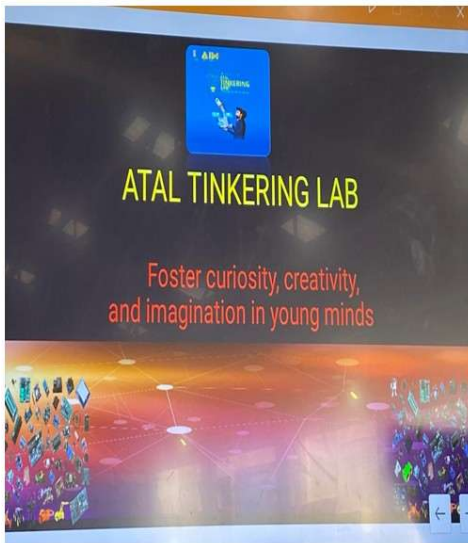
The inaugural day of the STEM Innovation Week at KV DRDO proved to be an inspiring start to the week-long celebration of science and technology. The informative presentations and enthusiastic participation highlighted the spirit of innovation and curiosity among the students.



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## ATL Activity on Mega Tinkering Day( 12-08-2025)

### Report on ATL Activity – Mega Tinkering Day

#### Project: “Vacuum Cleaner”

As part of the **Mega Tinkering Day** celebration on **12<sup>th</sup> August 2025** under the **Atal Tinkering Lab (ATL)** initiative, **Kendriya Vidyalaya DRDO** organized a hands-on activity focused on innovation, creativity, and problem-solving through the project “**Vacuum Cleaner**”. The event aimed to encourage students to apply STEM (Science, Technology, Engineering, and Mathematics) principles to create practical solutions for everyday problems.

The session began with a brief introduction to the concept of **clean and sustainable living**, highlighting how simple engineering mechanisms can be used to design cost-effective and eco-friendly devices. Students from **Classes VIII to X** enthusiastically participated in the tinkering session.

Under the guidance of trainers from AIM Mission, students collaboratively designed and assembled a **working model of a mini vacuum cleaner** using easily available materials such as plastic bottles, DC motors, propellers, and batteries. The activity demonstrated the use of **basic electronics, air suction principles, and motor mechanisms** to develop the functional prototype.

The project helped students understand the **working principle of suction and airflow**, circuit connections, and the importance of mechanical design in product development. The team also focused on the **sustainability aspect** by reusing waste materials, promoting the “Best out of Waste” concept.

The students showcased their working models and explained the scientific principles behind their creation. The innovative spirit and teamwork displayed by the participants reflected the true essence of tinkering and experiential learning promoted under the ATL framework.

The activity not only enhanced students’ technical and problem-solving skills but also nurtured their confidence and creativity. It served as a perfect example of how young minds can develop simple yet impactful solutions using scientific thinking and innovation.





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MEGA TINKERING DAY



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MEGA TINKERING DAY



## **Report on One-Day Exposure Visit under Atal Tinkering Activity(30/07/2025)**

**Venue: CMR Institute of Technology (IIC Institute), Bengaluru**

**Date: *[Insert Date]***

Under the **Atal Tinkering Lab (ATL)** initiative, a **one-day exposure visit** was organized for the students of **Kendriya Vidyalaya DRDO** to the **CMR Institute of Technology (IIC Institute), Bengaluru**. The visit aimed to provide students with real-world exposure to scientific applications and to inspire innovation through hands-on learning.

The program was coordinated by **Dr. N. Jayanthi**, Campus Coordinator from CMRIT IIC, in collaboration with the ATL team of KV DRDO. Two buses were arranged by the host institute for convenient transportation of 50 participants, including students and teachers.

During the visit, students attended interactive sessions conducted by faculty members from the **Departments of Physics and Chemistry**. The sessions highlighted the **real-world applications** of various scientific principles, linking textbook concepts with modern-day innovations.

Students were given **hands-on exposure** to laboratory experiments and demonstrations that illustrated the practical aspects of scientific theories. Experiments on material properties, energy conversion, and chemical reactions particularly captured students' interest. The interactive approach and real-life examples made the sessions both informative and engaging.

The students appreciated the opportunity to interact with professors and gain insights into advanced laboratory equipment and research techniques. The exposure helped them understand how fundamental science is applied in engineering, technology, and everyday problem-solving.

The visit was a resounding success, sparking curiosity, creativity, and a deeper appreciation for science and technology among students. It provided them with valuable experiential learning and motivation to explore careers in STEM fields.

## Report on ATL Linkage Tinkering Activity(17-04-2025)

### Orientation Session on the Innovation Launchpad

**Date:** 17 April 2025

**Venue:** Computer Lab, KV DRDO

**Time:** 1:00 p.m. – 3:00 p.m.

The **Department of Computer Science and Engineering (CSE)** of **CMR Institute of Technology (CMRIT), Bengaluru**, in association with the **Institution's Innovation Council (IIC)**, organized an **ATL Linkage Tinkering Activity** for the students of **Kendriya Vidyalaya DRDO**. The session was designed to introduce students to the **Innovation Launchpad**—a platform to foster creativity, entrepreneurship, and problem-solving skills through innovation.

The resource person, **Dr. N. Jayanthi**, Assistant Professor, Innovation Ambassador, and Head of Innovation & Entrepreneurship, Dept. of CSE, CMRIT, conducted an engaging **orientation session**. She briefed students on the **importance of innovation, idea generation, and the stages of transforming ideas into real-world solutions**.

The session included interactive discussions, practical insights into innovation processes, and exposure to the **Innovation and Entrepreneurship ecosystem** supported by the Institution's Innovation Council (IIC). Students gained awareness about opportunities to participate in innovation challenges, tinkering projects, and startup initiatives under ATL–IIC collaboration.

The session was highly informative and inspired students to think creatively and pursue innovation-driven learning. It successfully strengthened the linkage between **school-level tinkering and higher education innovation programs**.



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## **Report on ATL Linkage Tinkering Activity – Training & Bootcamp Session(10-07-2025)**

**Theme:** *Ideation to Innovation: Think – Create – Innovate*

**Date:** 10 July 2025

**Resource Person:** Dr. N. Jayanthi, Innovation Ambassador, Dept. of CSE, CMR Institute of Technology

As part of the Atal Tinkering Lab (ATL) initiative, **Kendriya Vidyalaya DRDO** organized an **ATL Linkage Tinkering Activity and Bootcamp Session** on the theme “*Ideation to Innovation: Think – Create – Innovate.*” The session was conducted by **Dr. N. Jayanthi**, Assistant Professor and Innovation Ambassador from the Department of Computer Science and Engineering, **CMR Institute of Technology (CMRIT), Bengaluru**.

The bootcamp aimed to nurture a spirit of creativity, innovation, and entrepreneurship among students by introducing them to the **concept of startups and innovation thinking**. Dr. Jayanthi explained the **basic idea of startups**, emphasizing how new ideas can evolve into practical solutions for real-world problems.

Students were guided through **key features of startups**, such as creative problem-solving, teamwork, scalability, and innovation. Interactive examples like “*Chill Bottle*” and “*Clean Bag*” helped students relate innovation to everyday challenges.

The session also included **7 simple steps to start a startup**, which covered identifying a problem, creating a solution, naming the startup, designing a logo, identifying users, planning promotion, and pitching ideas effectively. Students participated enthusiastically in brainstorming and mini idea presentations.

Through this engaging workshop, students learned that innovation can begin at any age and that simple ideas can lead to impactful ventures. The bootcamp successfully bridged the gap between classroom learning and entrepreneurial thinking, inspiring students to become future innovators and changemakers.

## Report on ATL Linkage Tinkering Activity – Mentor–Mentee Session(23-07-2025)

**Theme:** *Empowering Minds through Design Thinking*

**Date:** 23 July 2025

**Resource Person:** Dr. N. Jayanthi, Innovation Ambassador, Dept. of CSE, CMR Institute of Technology

Under the **Atal Tinkering Lab (ATL) Linkage Programme**, **Kendriya Vidyalaya DRDO** organized a **Mentor–Mentee interactive session** on “*Empowering Minds through Design Thinking.*” The session was conducted by **Dr. N. Jayanthi**, Assistant Professor and **Innovation Ambassador** from the **Department of Computer Science and Engineering, CMR Institute of Technology (CMRIT)**, Bengaluru.

The session aimed to introduce students to the **concept of Design Thinking**, a human-centered approach to problem-solving that encourages innovation through empathy, creativity, and experimentation. Dr. Jayanthi explained the **five stages of Design Thinking** — *Empathize, Define, Ideate, Prototype, and Test* — using relatable examples and interactive discussions.

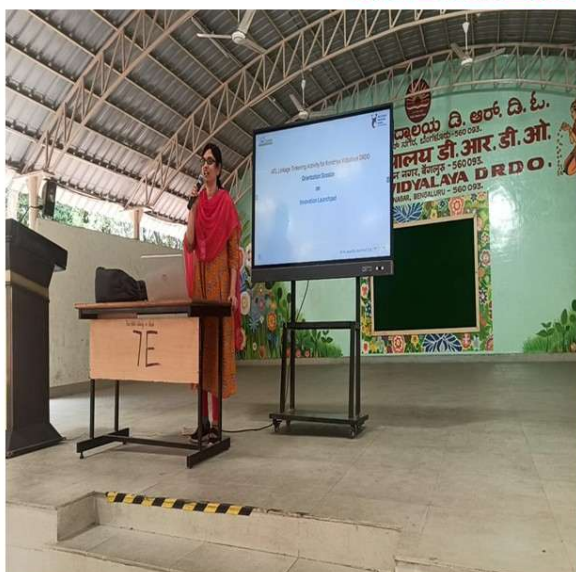
Students explored how **Design Thinking principles** can be applied to ATL projects and everyday challenges, particularly in developing innovative models like robotics-based solutions. Through engaging discussions, students learned how to identify real-world problems, brainstorm creative ideas, and develop user-focused prototypes.

The mentor–mentee interaction created an inspiring learning environment where students shared their project ideas, received constructive feedback, and gained clarity on refining their innovation processes. The session effectively strengthened the linkage between **school-level tinkering and higher education innovation ecosystems**.

The workshop successfully enhanced students’ analytical and creative thinking skills and motivated them to approach problem-solving with empathy and innovation.



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### Report on Viksit Bharat Buildathon 2025 (13-10-2025)

The **Viksit Bharat Buildathon 2025 – Mega School Innovation Event** was successfully organized at **Kendriya Vidyalaya DRDO, Bengaluru** on **13th October 2025** with great enthusiasm and active participation from students of Classes VI to XII.

The *Viksit Bharat Buildathon (VBB) 2025*, **India's largest school innovation hackathon**, was officially launched on the same day through a **live nationwide session** that connected over **1 crore (10 million) students** from across the country. The event was **inaugurated by the Hon'ble Union Education Minister, Shri Dharmendra Pradhan**, marking a remarkable milestone in India's pursuit of becoming a developed nation by 2047. The live streaming of this national launch was also witnessed by students and staff of KV DRDO.

At the school level, the event began with an **inspiring address by the Principal**, who motivated students to think creatively and use technology to solve real-world problems. Teacher coordinators provided a detailed briefing on the key Buildathon themes — **Aatmanirbhar Bharat, Swadeshi, Vocal for Local, and Samriddh Bharat** — emphasizing the importance of innovation for national growth and self-reliance.

A total of **21 teams** participated in the event, presenting their **project ideas and prototypes** with great zeal. Students showcased their creativity in diverse areas such as **Artificial Intelligence, IoT solutions, mobile and web app development, and sustainable innovations**. Throughout the event, mentors guided the participants to ensure that their ideas were practical, impactful, and technologically sound.

All projects were evaluated by a **panel of judges** based on **innovation, feasibility, and societal impact**. The best teams were shortlisted for uploading their projects on the **official Viksit Bharat Buildathon Portal**.

The program concluded with a **vote of thanks**, appreciating the efforts of students, mentors, and coordinators for making the event a resounding success. The *Viksit Bharat Buildathon 2025* provided an invaluable platform for young innovators to transform their ideas into actionable solutions, aligning with the national vision of building a **self-reliant and developed India**. The **last date for project submission** on the VBB portal is **31st October 2025**.





Viksit Bharat

Buildathon 2025

आत्मनिर्भर भारत का आह्वान, विकसित भारत का निर्माण

केन्द्रीय विद्यालय डीआरडीओ, बेंगलुरु

Kendriya Vidyalaya DRDO Bengaluru

MEGA SCHOOL INNOVATION EVENT [13-OCT-2025]





VISIT OF HON'BLE ASSISTANT COMMISSIONER SHRI RAYAMULLA SOKALLA TO KV DRDO

Viksit Bharat

Buildathon 2025

आत्मनिर्भर भारत का आह्वान, विकसित भारत का निर्माण

केन्द्रीय विद्यालय डीआरडीओ, बेंगलुरु

Kendriya Vidyalaya DRDO Bengaluru

MEGA SCHOOL INNOVATION EVENT [13-OCT-2025]





MENTOR INTERACTION WITH PARTICIPANTS

### **Report on Robotics Session by Soham Academy(12-12-2025)**

A Robotics Session was successfully conducted for Class 8 students by Soham Academy on 12th December 2025. The session aimed to introduce students to the fundamentals of robotics and hands-on learning using Arduino kits, thereby fostering interest in technology, innovation, and problem-solving skills.

A total of 50 students enthusiastically participated in the session. The resource persons from Soham Academy explained the basic concepts of robotics, electronics, and programming in a simple and engaging manner. Students were then guided to work on practical projects using Arduino kits, which helped them understand real-world applications of robotics.

The session was highly interactive, with students working in teams to design and implement their projects. The hands-on approach encouraged creativity, teamwork, and logical thinking among the participants. Several innovative project ideas were demonstrated by the students during the session.

At the conclusion of the program, certificates were distributed to all participants in recognition of their active involvement. Additionally, badges were awarded to selected teams who demonstrated exceptional performance. These selected teams will be advancing to another round of competitions, providing them with further opportunities to showcase and enhance their skills.

Overall, the robotics session was an enriching and inspiring experience for the students. It successfully ignited curiosity in robotics and technology and motivated students to explore learning beyond textbooks. The school extends its sincere appreciation to Soham Academy for conducting this informative and engaging session.



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ROBOTIC SESSIONS



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ROBOTIC SESSIONS





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