



STEAM INNOVATION LEAGUE

World's Biggest AI & Robotics Competition focused around Innovation

Innovation + Creativity + Collaboration = SIL

STEAM Innovation League in Global Partnership with Arduino Education



ABOUT

STEAM Innovation League

The STEAM Innovation League (SIL), organized by STEMROBO TECHNOLOGIES in collaboration with Arduino Education, is an exciting global competition designed for K-12 students to showcase their skills in STEAM, AI, Robotics, and Coding. SIL empowers students to create economically viable solutions that drive India's technological growth and support the UN's Sustainable Development Goals (SDGs). This year, SIL brings an enriched experience with workshops, expert mentorship, and countless prizes at every stage—offering unique opportunities not just for students but also for teachers, mentors, and schools. The journey peaks with the national round winners flying to Italy to present their innovative projects on the global stage.

We will Appreciate

-  Creativity and Collaboration
-  Economical and Application Based Projects
-  Innovative ideas to solve real world problems
-  Sustainable Development Projects

VISION OF

STEAM Innovation League

The vision for the STEAM Innovation League (SIL) is to inspire and empower K-12 students worldwide to become future-ready leaders, innovators, & problem-solvers. Through this global platform, SIL aims to foster a deep passion for STEAM, AI, Robotics, and Coding while encouraging students to design innovative solutions that address real-world challenges. By equipping young minds with critical 21st-century skills, SIL envisions a future where students not only excel academically but also contribute to sustainable global progress, shaping a world that thrives on creativity, technology, and collaboration.

TRUSTED BY

3500+
Schools

1.5+ MN
Students

30+
Countries



2024-2025 THEME OF SCIENCE & TECHNOLOGY

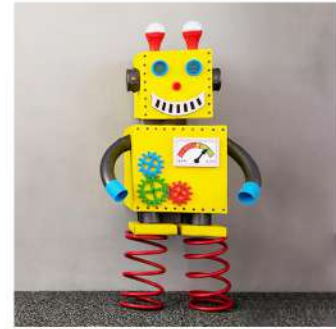
We are launching 5 categories on which teams can participate. Students can work on more than one category and make Economical and Application Based projects. Projects should be solution-oriented and applicable to Solve Real World Problems.



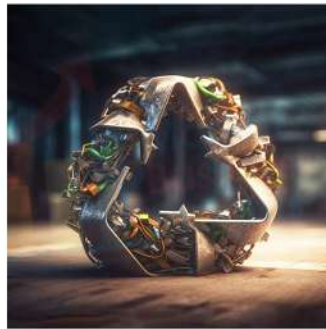
Space Technology



3D Tech Design



Toycathon



BOW(Best of waste) Tech



Medical Technology



PROJECT

Ideas for all the Categories



1. Space Technology



- **Mars Rover:** Develop a prototype rover for navigating and performing tasks on Mars, addressing terrain challenges and autonomous operation.
- **Energy Conservation in Space:** Create solutions for conserving energy on space missions, including efficient power systems and renewable energy sources.
- **Wireless Tech in Space:** Develop robust wireless communication systems for space, improving data transmission between spacecraft, satellites, and ground stations.
- **Launch Pad Tech:** Design technology to enhance safety and efficiency of launch pad operations, such as automated fueling systems and environmental monitoring.
- **Space Mission Helping Bots:** Create robots to assist astronauts with repairs, maintenance, scientific experiments, or companionship.
- **Space Exploration Tech:** Develop tools and systems to support space exploration, including planetary surface exploration and deep space travel.
- **Health Monitor for Astronauts:** Design wearable devices or systems for continuous health monitoring of astronauts, including remote diagnostics and vital signs tracking.

2. 3D Technology Design Categories

Teams must choose one of the following ideas for their project:

- **3D Printed Prosthetics:** Design and print prosthetic limbs or devices to assist individuals with disabilities.
- **Architectural Models:** Create detailed and functional models of buildings or infrastructure using 3D printing.
- **Educational Tools:** Develop interactive 3D printed models for educational purposes in subjects like biology, chemistry, and physics.
- **Customizable Gadgets:** Design and print customizable electronic gadgets or accessories that serve a specific function or solve a problem.

3. Toycathon Categories

Teams must choose one of the following ideas for their project:

- **Educational Toys:** Develop toys that help children learn subjects like math, science, and language in an engaging and interactive way.
- **Sustainable Toys:** Create toys made from eco-friendly materials that promote sustainability and environmental awareness.





- **STEM Toys:** Design toys that encourage interest in science, technology, engineering, and mathematics.
- **Cultural Toys:** Develop toys that represent and teach about different cultures, traditions, and histories from around the world.

4. Best of Waste (BOW) Technology Categories

Teams must choose one of the following ideas for their project:

- **Recycled Robotics:** Build robots or devices using recycled materials to demonstrate the principles of recycling and reusability.
- **Eco-Friendly Products:** Create products from waste materials that can be used in daily life, promoting a circular economy.
- **Art from Waste:** Develop artistic and functional creations using waste materials, highlighting the importance of waste management.
- **Upcycled Gadgets:** Design gadgets or tools using upcycled components, reducing electronic waste and promoting sustainability.

5. Medical Technology Categories

Teams must choose one of the following ideas for their project:

- **Wearable Health Monitors:** Develop wearable devices that monitor vital signs and health metrics in real-time.
- **Telemedicine Solutions:** Create technologies that facilitate remote diagnosis and treatment, improving access to healthcare.
- **Medical Assistive Devices:** Design devices that assist individuals with disabilities or chronic conditions in their daily lives.
- **Health Data Analytics:** Develop tools for analyzing health data to provide insights and improve medical outcomes.



AWARDS & PRIZES

STEAM Innovation League



The STEAM Innovation League, organized by STEMROBO Technologies in collaboration with Arduino, offers thrilling opportunities for students, teachers, schools, and mentors at every stage of the competition. Here's what you can win:

For Students

▶ National Round Participants & Winners

- **Grand Prize:** Winners of the National Round will get the opportunity to present their projects on the global stage at Arduino Day 2025 in Italy.
- **Spotlight Opportunity:** Get the chance to participate in Arduino Hackathon.
- **Arduino Kits and Boards:** Get original Arduino boards and tools to participate in Arduino Hackathon.
- **Co-Branded Certificates:** Exclusive certificates from STEMROBO and Arduino Education.

▶ Regional Round Highlights:

- Mentorship sessions with experts.
- Exciting goodies and certificates of excellence.

▶ Participation Benefits:

- E-certificates for all participants recognizing their efforts and innovation.



AWARDS & PRIZES

STEAM Innovation League



For Teachers and Mentors

- ▶ **Recognition Awards:** Special awards for mentors guiding winning teams.
- ▶ **Training Opportunities:** Invitations to exclusive AI, Robotics, and STEM training sessions.
- ▶ **Certificates:** Co-branded certificates from STEMROBO & Arduino Education recognizing your contribution to nurturing young innovators.

For Schools

- ▶ **Innovation Excellence Award:** Recognition as a 21st-Century Showcase School for active participation in SIL.
- ▶ **Special Mention:** Winning schools will be prominently featured in national and international media.
- ▶ **Collaborative Opportunities:** Access to advanced workshops and collaborations with global organizations.

Exciting Opportunities Throughout the Competition

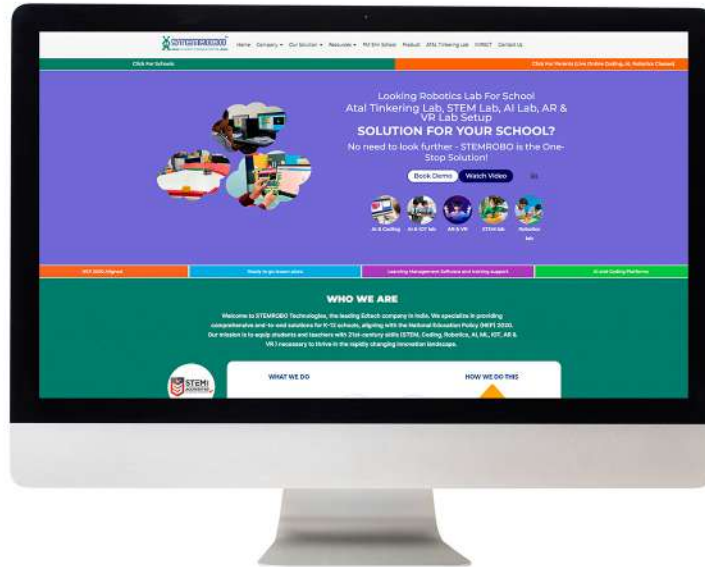
- ▶ Surprise prizes and awards announced at different phases of the competition.
- ▶ Exclusive STEMROBO and Arduino goodies at workshops and hackathons.
- ▶ Invitations to special events and learning sessions for participants.



STEPS FOR REGISTRATION



- ▶ Visit <https://www.stemrobo.com/>



- ▶ Click on SIL Menu

- ▶ Visit the SIL Page to Register.



- ▶ Click on the Register button and fill in all the details which will be considered for smooth communication related to SIL.

- ▶ For any query regarding SIL, click on button and chat with us



KEY DATES AND PHASES

STEAM Innovation League



- ▶ **Launch Date :**
July 16, 2024 – Celebrated on A.I. Appreciation Day.
Registration and idea submission open from July 16, 2024, to December 15, 2024.
- ▶ **Last Date:** for Registration is – 15th December.
Announcement of results based on best ideas and SOP evaluations – 20th December.
- ▶ **Virtual/Regional Round:**
January, 2025: Round 2 which will be either virtual or regional will be held in January, the students who will be selected for the 2nd round will have to showcase their 60–70% working project during the showcase event.
- ▶ **National Level Competition:**
February 15, 2025: Two rounds at the national level:
 - Round 1: Presentation of SIL projects.
 - Round 2 (Arduino Hackathon): An on-the-spot problem-solving challenge focused on the SIL theme, where students will create solution-oriented projects using Arduino original boards & microcontrollers.
- ▶ **Winners Announcement:**
Determination of top 3 winners based on the combined results from both the National-level rounds.
- ▶ **Arduino Day, Italy (International Round):**
March 21 – March 23, 2025: The top 3 winners from the national round will present their project at Arduino's Italy headquarters during Arduino Day for international round.



GENERAL GUIDELINES



Code of Conduct:

- All participants must adhere to the competition's code of conduct, demonstrating respect, sportsmanship, and integrity.

Safety and Compliance:

- Projects must comply with all safety regulations and guidelines provided by the competition organizers.

Support and Resources:

- Teams may seek guidance and support from mentors and teachers but must ensure that their project work is original and primarily student-driven.

Final Notes:

- The competition aims to foster innovation, creativity, and technical skills among K-12 students.
- Participants are encouraged to think outside the box and push the boundaries of their imagination and technical abilities.



STRATEGIC PARTNER AND ALLIANCES



Our Industrial and Education-space tie-ups are worth flaunting.



Skill India
कौशल भारत - कुशल भारत



सत्यमेव जयते
GOVERNMENT OF INDIA
MINISTRY OF SKILL DEVELOPMENT
& ENTREPRENEURSHIP

