

Brick by Brick: Building Empowered Communities through Lego Robotics

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Primary Educational Funding Challenges Provide an Opportunity to Libraries

- ★ One third of district budgets failed on the first vote this year
- ★ Impact on access to STEM programs for youth

Introduction to LEGO First Robotics

What is Lego First Robotics?

<https://www.firstlegoleague.org/about>


**FIRST
LEGO
LEAGUE**
DISCOVER

AGES
4-6

A group of young children are focused on building with colorful LEGO bricks on a table. One child is using a blue motor, while others are stacking bricks. The scene is brightly lit, suggesting an indoor event space.


**FIRST
LEGO
LEAGUE**
EXPLORE

AGES
6-10

Two young girls are working together on a LEGO robot. One girl is using a pair of scissors to cut a piece of paper, while the other looks on. They are surrounded by various LEGO parts and a display board with photos and notes. The background shows other participants and displays.

**FIRST
LEGO
LEAGUE**
CHALLENGE

AGES
9-16

A group of teenagers, mostly wearing red shirts and caps, are gathered around a table. They are looking at a LEGO robot and discussing it. One girl is pointing at the robot, while others listen attentively. The setting appears to be a competition or workshop.

Benefits of LEGO First Robotics in Libraries

- ★ Inclusivity and accessibility
- ★ Opportunity for youth engagement and empowerment
- ★ STEM education

Libraries are Ideal Hosts for Robotics

- ★ Libraries are community hubs
- ★ Inherent accessibility of libraries
- ★ Role of libraries in fostering lifelong learning



Strengthening Community Ties

- ★ Building relationships between libraries and communities
- ★ Collaborative efforts for youth development
- ★ Promoting STEM education as a community goal



Starting a LEGO Robotics Team in Your Library

- ★ Steps to initiate a LEGO First Robotics team
- ★ Identifying key stakeholders and partners



Community Outreach

- ★ Strategies for engaging with the community
- ★ Reach out to schools, youth groups, and local organizations



Volunteer Recruitment

- ★ Importance of volunteers in robotics programs
- ★ Where to recruit mentors and coaches from the community



Funding Options

- ★ Exploring funding opportunities for robotics teams
- ★ Grants, sponsorships, and partnerships
- ★ <https://www.firstinvt.org/>



Leveraging Library Resources

- ★ Utilizing library facilities and resources for robotics activities
- ★ Incorporating technology and maker spaces



Equipment and Materials

- ★ Essential equipment and materials for LEGO robotics teams
 - Robotics season map
 - Board or large flat area for map
 - Robotics kit
 - Laptops



Lego Robotics Challenge Team Season

- ★ End of August through January/February
- ★ Once or twice a week meetings
- ★ Teams work on the robotics season challenge map and Innovation Project

Training and Support

- ★ Curriculum supports mentors
- ★ <https://www.firstinvt.org/programs/programs-guide/>



Team Culture & Core Values



Teamwork



Fun



Discovery



Innovation



Impact



Inclusion

Competitions and Events

- ★ Challenge teams participate in a Qualifier Competition
- ★ Top teams move on to the State Competition at Norwich University
- ★ Winners qualify for the National Competition

Impact and Success Stories

- ★ 2022/2023 Bixby Robotics teams grew from 1 Explore Team and 1 Challenge Team serving 17 kids from 6 different towns
- ★ 2023/2024 Bixby Robotics grew to an additional Challenge Team 21 kids from 7 different towns



Future Opportunities

- ★ Expanding LEGO robotics initiatives in libraries
- ★ Building sustainable programs for long-term impact



Lego Robotics and Libraries

A partnership worth pursuing:



Questions and Discussion

