



CHALLENGE

FIRST® LEGO® League Challenge Ignites STEM Engagement

Hands-On Classroom and After-School Programs

Friendly competition is at the heart of Challenge, as teams of students ages 9-16* engage in research, problem-solving, coding and engineering – building and programming a LEGO robot that navigates the missions of a robot game. As part of Challenge, teams also participate in a research project to identify and solve a relevant real-world problem.

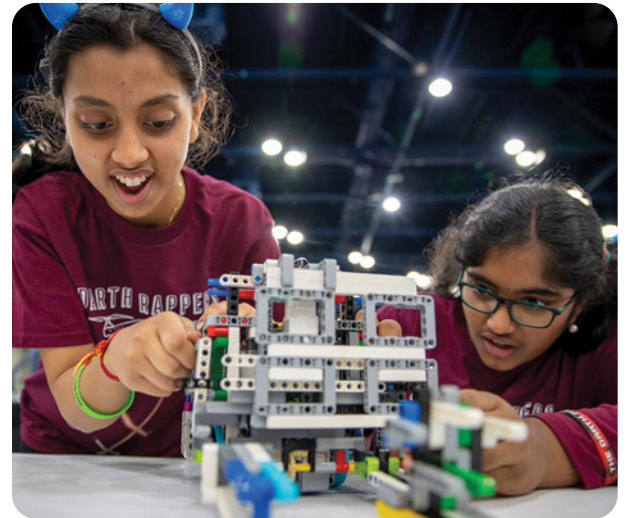
Learn more about FIRST LEGO League by visiting www.firstlegoleague.org.

FIRST LEGO League Challenge Class Pack

Challenge can be implemented through FIRST Class Packs, which provide the curriculum educators and facilitators need to guide their students through 12 sessions as they explore STEM (science, technology, engineering, and math) and robotics and develop an innovative solution to a real-world problem pertaining to the season theme.

Challenge Implementation Study

From 2019-2022, FIRST worked with the Lawrence Hall of Science, UC Berkeley¹ to evaluate the FIRST LEGO League Explore and Challenge programs. Goals of the evaluation included understanding impact the programs had on students and teachers. This evaluation was funded by the LEGO Foundation.



Key Findings

Teachers and facilitators noted positive student outcomes in core FIRST program areas, including:



Students have gains in creativity

Imaginative thinking 97%

Coming up with unusual, unique, or clever ideas 93%

Students have gains in teamwork and problem solving

Ability to work with others 100%

Ability to make a decision as a team 97%

Ability to accept feedback or criticism 97%

Ability to adapt, improve, and modify ideas 100%

Students have gains in STEM Outcomes

Interest in STEM 100%

Confidence in STEM 100%

Programming and coding skills 100%

Understanding STEM content 97%

Students reported increased interest in robotics and programming

Robotics 67%

Programming 60%



"...Class Pack provides [the idea] that robotics is not just for most students, but for all students. So every kid can feel that they are worthy to work with [this] equipment."

– Teacher

Learn more at firstinspires.org/impact

*ages vary by country

¹ Collins, M., Sanchez, A., Yun, S., Grindstaff, K. (2022). Evaluation of the FIRST LEGO League Explore and FIRST LEGO League Challenge Class Pack Model. Berkeley, CA: The Research Group, Lawrence Hall of Science.

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