FIRST® LEGO® League Ignites STEM Engagement

Hands-On Classroom and After-School Programs

FIRST® LEGO® League guides youth through STEM (science, technology, engineering, and math) learning and exploration at an early age. From Discover, to Explore, and then to Challenge, students will understand the basics of STEM and apply their skills in an exciting competition while building habits of learning, confidence, and teamwork skills along the way.

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

FIRST LEGO League Class Pack

FIRST LEGO League can be implemented through FIRST Class Packs, which includes curriculum for educators and facilitators to guide their students through 12 sessions as they explore STEM and robotics.

FIRST LEGO League Studies

From 2018-2021, FIRST worked with WestEd[1] to evaluate the FIRST LEGO League Discover program. Goals of the evaluation included understanding the impact the program had on students and teachers. This evaluation was funded by the LEGO® Foundation.

From 2019-2022, FIRST worked with the Lawrence Hall of Science, UC Berkeley[2] 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.
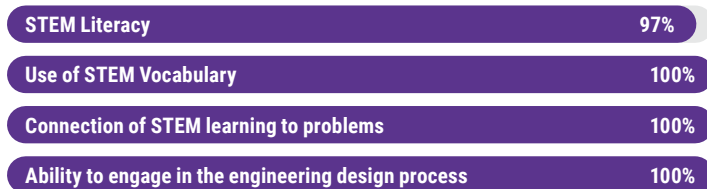

Key Findings

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

Students have gains in STEM Outcomes

FIRST LEGO LEAGUE DISCOVER

STEM Literacy	97%
Use of STEM Vocabulary	100%
Connection of STEM learning to problems	100%
Ability to engage in the engineering design process	100%

FIRST LEGO LEAGUE EXPLORE

Interest in STEM	100%
Confidence in STEM	100%
Programming and coding skills	97%
Understanding STEM content	97%

FIRST LEGO LEAGUE CHALLENGE

Interest in STEM	100%
Confidence in STEM	100%
Programming and coding skills	100%
Understanding STEM content	97%

> *"The power of LEGOs during the school day was amazing. Students were the driving force behind helping teacher[s] understand the relevance of LEGOs and all content areas. It worked!"* — Teacher

Students have gains in teamwork and problem solving

FIRST LEGO LEAGUE EXPLORE

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	97%

FIRST LEGO LEAGUE CHALLENGE

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%

Learn more at **firstinspires.org/impact**

1 Melchior, K., Tyler, B., Nguyen, K., Matlen, B. (2021). FIRST LEGO League Discover – Final Evaluation Report. San Francisco CA: WestEd.
2 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.