



DISCOVER

FIRST® LEGO® League Discover Builds STEM Literacy and Social-Emotional Learning

Hands-on Activities in the Classroom and at Home

Designed for children ages 4-6, FIRST® LEGO® League Discover ignites students' natural curiosity and builds their habits of learning with hands-on activities in the classroom and at home using LEGO® DUPLO® bricks, including the LEGO® Education STEAM Park Set, to grow their understanding of gears, motion, measurement, and solving problems together. Themed Discover Sets help children explore how STEM relates to their world.

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

FIRST LEGO League Discover Class Pack

Discover is implemented through FIRST® Class Packs, which provide facilitators with the tools and resources to lead early learners Children ages 4-6 work in small groups/teams of four, over 10 one-hour sessions on STEM-based challenges using elements from LEGO STEAM Park and the Discover Set. Through age-appropriate inquiry and exploration, students build a model to respond to the challenge using LEGO DUPLO® bricks. Over the 10 sessions, students are introduced to the engineering design process, explore themes and ideas, create solutions, test them, iterate, redesign, and share what they learn with others. They build social-emotional skills through collaboration, teamwork, and learning through play. The program ends in a celebration where students showcase their models, collaborate with others, and share what they build and learn.

Discover Impact Study

From 2018-2021, FIRST worked with WestEd+ 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.

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

KEY FINDINGS

Teachers and facilitators noted positive student outcomes in core FIRST program areas, including STEM literacy and social-emotional learning.

Students have gains in STEM Outcomes

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

Discover meets the holistic needs of students

Social	100%
Academic	100%
Emotional	97%
Physical	94%

Students have gains in social-emotional skills

Self Awareness	97%
Self Regulation	95%
Empathy	95%
Taking Responsibility	97%



KEY FINDINGS CONTINUED

At the end of the program, 100% of teachers agreed:

- ✓ Children learn effectively through play
- ✓ Children learn best by experimenting with hands-on materials
- ✓ Early exposure to STEM activities fosters children's interest in STEM later on



“Our students are using their minds to create stories and act them out. They are learning to share and make friends. They are learning some new vocabulary, and they are using fine motor skills.”

– Teacher



At the end of the program, teachers:

ENJOY TEACHING STEM

100%

FEEL WELL PREPARED TO TEACH STEM

84%

FEEL WELL PREPARED TO ENGAGE STUDENTS IN PROJECT-BASED LEARNING

90%

FEEL MORE CONFIDENT IN TEACHING STEM TO EARLY LEARNERS

87%

Teachers use multiple STEM instructional strategies to teach young learners:

SMALL GROUPS TO SOLVE STEM-RELATED PROBLEMS

92%

DEMONSTRATIONS OF STEM-RELATED PRINCIPLES

97%

ENCOURAGE THEIR STUDENTS TO ASK QUESTIONS

100%

READING STEM-RELATED TEXTS TO STUDENTS

92%



“The girls loved it, the boys loved it ... regardless of language, regardless of special needs, regardless of proficiency. They're all on the same level, and that's what's nice.” – Teacher

Learn more at firstinspires.org/impact

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