

# PROPEL & LEVEL UP STEM PROGRAMS

## ADDRESSING EQUITY THROUGH ENRICHMENT FOR ECONOMICALLY-VULNERABLE STUDENTS



Loudoun County Public Schools  
21000 Education Ct.  
Ashburn, VA 20148  
Dr. Eric Williams, Superintendent

October 2019

### GOAL ONE

Develop high-level reasoning skills in students.

### GOAL TWO

Provide students with opportunities to enhance behaviors associated with high achievement and/or giftedness with parents as educational partners.

### GOAL THREE

Help students plan and prepare for academically rigorous coursework in middle and high school and for entry into competitive academic programs.



## LCPS PROPEL & LEVEL UP STEM PROGRAMS

Launched in 2017, Loudoun County Public Schools offers afterschool Science, Technology, Engineering, and Mathematics (STEM) programs designed to provide academic support for students who are economically vulnerable. The programs give students extra time to develop the critical skills needed to close the “opportunity gap.”

Formerly called EDGE Plus, PROPEL (*Providing Rich Opportunities Plus Enrichment Learning*) focuses on 4th and 5th grade students in select elementary schools.

Level Up for middle school students was added in 2018 with programming for 6th graders. The curriculum includes engaging tasks that are designed to build computational and analytical thinking skills within the context of intensive, long-term STEM investigations.

In addition to the afterschool program, Level Up students were invited to attend Level Up at the Academies of Loudoun during the summer program in 2019. Students participated in high school level courses in the areas of Chemistry/Physics, Life Sciences, and Robotics.

## YEAR TWO PARTICIPATION (2018-2019)

| PROPEL        | Level Up     | Level Up at the Academies |
|---------------|--------------|---------------------------|
| Schools: 7    | Schools: 2   | Students: 60              |
| Students: 195 | Students: 60 | Grade: 6                  |
| Grades: 4 & 5 | Grade: 6     |                           |



## YEAR THREE GOALS (2019-2020)

Number of schools: 13  
Number of students: 480  
Grades: 4-7

## RESULTS IN 2018-19

- Improved confidence in STEM skills
- Faster growth in reading skills from fall to spring
- Opportunity for middle school students to experience high school-level content



## COMMUNITY PARTNERS

PROPEL and Level Up are supported by generous donations of funds and resources from:

- Jack Kent Cooke Foundation
- Howard Hughes Medical Institute
- HSBC Bank
- Salesforce
- Virts Miller Family Foundation

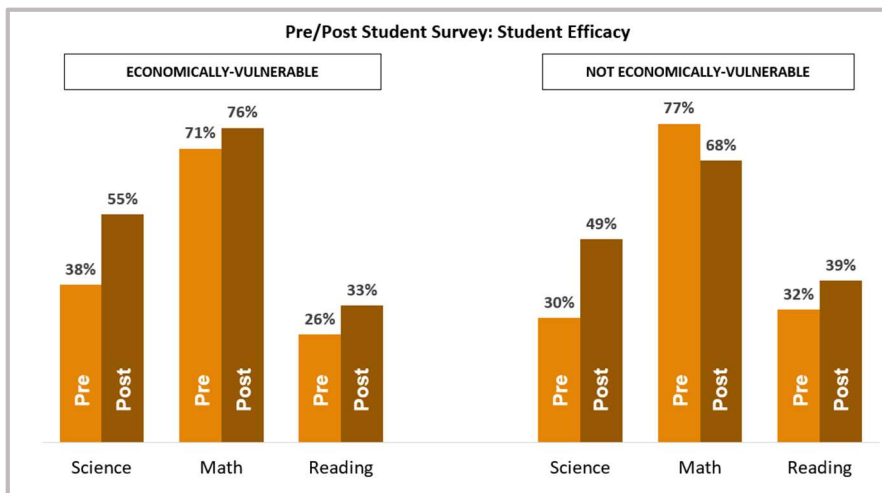
For information about opportunities for community involvement, contact:

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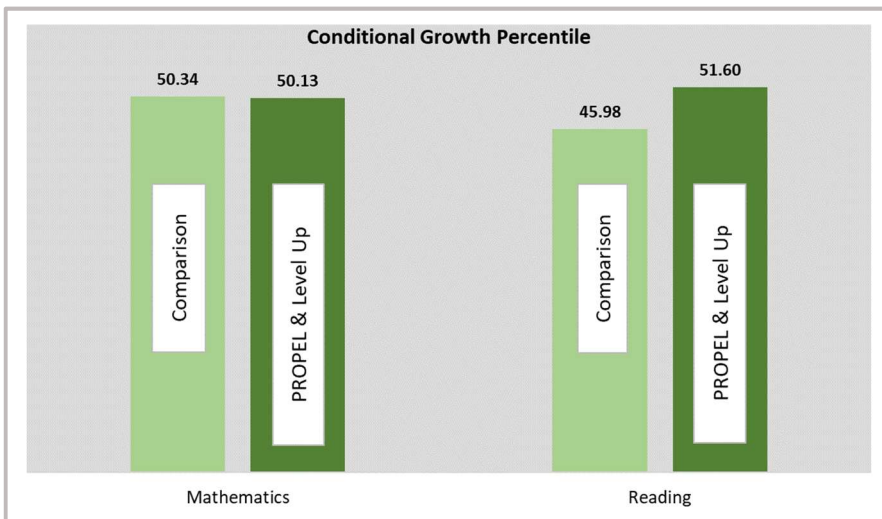
## IMPACT ON SELF-EFFICACY

Economically-vulnerable students had greater confidence in their abilities in Science, Math, and Reading after participating in the program according to pre- and post-surveys (e.g., “I am sure I can do well on tests in...”).



## SUPPORT FOR ACADEMIC SKILLS

PROPEL and Level Up students grew at a faster rate than Comparison students in Reading as measured by the Conditional Growth Percentile from the 2018-19 Measures of Academic Progress (MAP) Assessment.



*I want to say thank you because I've never had so much fun before. I loved everything we did, including the Kanos, the Tapigami, the robots, everything! I've learned many new things. It was exciting and awesome.*

- PROPEL Student

