



Loudoun County Public Schools

PROPEL / LEVEL UP PROGRAM

EVALUATION REPORT SUMMARY

Program Description

The mission of PROPEL and Level Up is to provide enrichment for high-achieving elementary and middle school students who are underrepresented in the STEM fields. The program goals are to:

- Develop high-level reasoning skills in students,
- Provide students with opportunities to enhance behaviors associated with high achievement and demonstration of the 5Cs,
- Assist students with planning and preparing for academically rigorous coursework in middle and high school and for entry into competitive academic programs, and
- Provide opportunities for parents to share as educational partners.

The programs support Strategic Action 1.2 (Multiple, Accessible Pathways to Success) of the One LCPS: 2027 Strategic Plan because students who are underrepresented need additional opportunities to participate in authentic STEM experiences, prepare for academically rigorous coursework, and develop their critical thinking, computational thinking, problem solving and collaboration skills.

In the 2023-24 school year, PROPEL activities were provided weekly to 260 Grade 4-5 students after school in 10 schools. Level Up was offered to 203 Grade 6-8 students in 5 schools during the school day or after school.

Research Questions

1. What were the demographics of the students who completed the program?
2. What were the experiences of the teachers in implementing the program?
3. Did the students' perceptions of their own academic ability and skill level improve after participating in the program?
4. Did the students' interests in math and science change after participating in the program?
5. How are the students progressing in math and reading relative to their peers?
6. How are the students represented in applications to the Academies of Loudoun?
7. To what extent did the students enroll in advanced math and science courses?

Conclusions

Strengths

- Emphasis on enrollment of Hispanic students
- High levels of teacher satisfaction with the curriculum materials, professional development, and guidance from staff
- Perceived improvement to the students' STEM skills
- Sufficient opportunities for parent communication and engagement

- Increased student interest in science (PROPEL) and math (Level Up) and continued plans to take these advanced courses in both programs
- Relatively high percentages of Level Up students enrolled in advanced math courses
- Improvement in enrollment of Level Up students in advanced science courses

Areas of Improvement

- Underrepresentation of females in both programs
- Need for sufficient materials for PROPEL teachers to complete the activities
- Curriculum gap between the lesson content and the teachers' daily instruction
- Decreased student self-efficacy across most targeted activity domains

Recommendations

1. **Add more challenging reading material:** Incorporate advanced STEM-related reading materials to (a) build comprehension and analytical skills, (b) prepare students for rigorous academic coursework, and (c) strengthen critical thinking and problem-solving abilities.
2. **Increase collaboration between program leaders and classroom teachers:** Connect what happens in PROPEL and Level Up with what students are learning in the classroom by (a) inviting content teachers to attend PROPEL and Level Up professional development sessions, (b) aligning STEM activities with classroom instruction for a cohesive learning experience, and (c) improving communication with parents by presenting a unified approach to education.
3. **Raise early awareness of honors courses:** Increase opportunities for students to enroll in honors courses by (a) informing parents about honors opportunities starting in the 4th grade, (b) highlighting how PROPEL activities align with honors coursework, and (c) using success stories of alumni excelling in honors classes to inspire students and families.
4. **Increase representation of girls in STEM:** Engage girls in STEM careers by (a) partnering with community organizations like the Children's Science Center and Latina Sci Girls; (b) offering mentorship, hands-on workshops, and exposure to female STEM professionals; and (c) creating an encouraging and inclusive environment for young girls to thrive.

Why These Changes Matter

1. Align with LCPS One LCPS: 2027 Strategic Plan for Excellence:
 - a. Enhance rigor in education.
 - b. Foster collaboration across programs.
 - c. Promote equity, inclusion, and access to advanced opportunities.
2. Ensure PROPEL and Level Up remain impactful, inclusive, and aligned with district goals.

The full report can be accessed [here](#).

