

A New Answer for a Changing Community

How Northglenn High School responded to shifting demographics and community perception by becoming Adams 12's STEM-focused high school—and what it's achieved since.

The Challenge

- Around 2008, Northglenn High School faced a challenge familiar to many districts today.

As families gained more school choice options, more were questioning whether Northglenn High School was the right fit for their children. District leaders needed a way to rebuild confidence, strengthen the school's reputation, and attract more families.

Northglenn's superintendent at the time knew they needed to differentiate themselves from other schools. "Northglenn doesn't have an instructional quality problem," he told staff. "We have a marketing problem."

Adams 12 Five Star Schools leadership agreed, and the district chose a different strategy: Transform Northglenn into the district's first STEM-focused high school to ensure students could thrive in an evolving world driven by technology, innovation, and change. After researching possible partners, Northglenn's principal selected Project Lead The Way (PLTW) to power that transformation.



PLTW School Spotlight

Northglenn High School



Grades 9–12

A suburban comprehensive high school in Thornton, CO



School District

Adams 12 Five Star Schools



Student Population

1,800 enrolled

- Hispanic: 75%
- White: 17.4%
- 2+ Races: 3.1%
- Asian: 2.2%
- Black: 1.5%
- American Indian/
Alaskan Native: 0.7%
- Pacific Islander: 0.2%



Free/Reduced-Price Lunch

71.7% are eligible



Using PLTW Since

2011



The Solution

> A Career-Connected STEM Model

Lori Egan has watched Northglenn's transformation from both sides of the desk. A Northglenn graduate herself, she now teaches primarily in the biomedical science program, serves as PLTW site coordinator, and is a master teacher for the Human Body Systems course.

In 2011, Northglenn introduced [PLTW Engineering](#) and [PLTW Biomedical Science](#) programs. Both grew quickly enough that the school is now extending the same model to computer science—a pathway currently taught through AP that's transitioning fully to [PLTW Computer Science](#) next year, building on what's worked in engineering and biomed.

To help sustain and grow their pathways, Northglenn uses grants from PLTW to train new teachers and offset the cost of equipment.

"PLTW is amazing in their ability to offer grants, and the ease for a teacher to apply for those grants," Egan said. "It's not a cumbersome process. You fill out one application for whatever program ... and it's good for any grants that are available."



Today, PLTW reaches one quarter of Northglenn's roughly 1,800 students. Each course helps students build critical skills, discover new interests, and explore college and career opportunities they might not have known existed. For these students, solving real-world problems and designing functional solutions becomes second nature.

Key Transformations at Northglenn



Problem-Based Learning

Northglenn expands on PLTW's authentic, real-world challenges by providing opportunities to work alongside higher education and industry partners by hosting showcases and partner visits.



Employability

At Northglenn, all pathways build skills future employers want in job candidates. In addition to crucial digital literacy and industry-specific technical competencies, learning opportunities strengthen durable skills like collaboration, creativity, and problem-solving.



Inquiry

Students at Northglenn aren't just taught to find answers. Pathways encourage students to ask questions to better understand content and its significance in the world outside the classroom.

Built to Reach **Every Student**



A lot like their school, Northglenn students approach learning a little differently, and it's rarely linear. PLTW experiences teach students that solutions are found by looking at and approaching problems from multiple angles.

// They don't always expect the right answer. They expect that there's going to be an iterative process. Sometimes the first answer isn't the right one, and they're okay with that."

— **Lori Egan, PLTW Site Coordinator,
Biomedical Science Teacher**

Egan believes that comfort with an unclear first answer—call it productive struggle—is a skill every student should graduate with. At Northglenn, students in PLTW programs build that resilience as early as freshman or sophomore year.

// I think some of the students I see grow the most are our students who come in as struggling students. They haven't been engaged in school in a long time, or traditional school just doesn't seem to work for them. This is a program that's really good for these kids."

— **Lori Egan, PLTW Site Coordinator, Biomedical Science Teacher**

"I always say the kids who have the PLTW experience aren't just asking for answers. They're asking, 'How can I solve this problem?'" Egan said. "Where other students are just like, 'Give me the answer. Tell me what it is,' our kids have that perseverance to keep digging and find the answer. We see that in the ninth graders that come in from our feeder schools."

Those feeder schools are the district's [STEM-focused K-8 schools](#), which use PLTW as part of their core curriculum starting in kindergarten. By the time students arrive at Northglenn, they already have a solid STEM mindset that lets them dive deeper into career pathways.



**450 Northglenn students are
enrolled in PLTW courses.**

The Outcomes

- Growth is the clearest evidence of Northglenn's return on this investment.

PLTW has grown from two programs in 2011—recently expanding to three with the addition of computer science—to reach a quarter of the school today. And no matter when a student starts a pathway, Egan said PLTW sets them up for what comes next.

"I'm on my fourth or fifth student in medical school now," Egan said. "I have some PhD students. We actually had our CTE spring advisory, and one of our former engineering students came back, and she has a job in the aerospace industry."

Who's in the room has changed, too. "When we first started this, I think we had two girls in our engineering program," Egan said. "Now ... I'm not saying it's 50-50, but it's definitely swung where there's a lot more girls in our engineering and a lot more boys in our biomed, which I think is awesome."

The pathways haven't just changed outcomes for students; they've also changed the day-to-day of the classroom. Teachers look forward to introducing new students to PLTW every year.

"It feels new to me all the time," Egan said. "I don't feel like I'm just walking in and being like, 'Okay. I've done this for the last 10 years. Let's do it again.' I can make it new every year. And really, that's because the kids guide what some of that looks like based on how they're approaching or thinking about the problems that we're solving."



// "The kids are talking every day. They're not sitting on a computer doing what I call online school in school. They're using the computer as a tool to get to the resources they need, but they're talking."

— **Lori Egan, PLTW Site Coordinator,
Biomedical Science Teacher**

The classroom runs differently, too, with Egan acting more as a facilitator than a lecturer. "It's just constant engagement. But at the end of the day, I always feel like I walk out of the classroom knowing exactly what my kids know and understand in that moment."



Facing a similar challenge in your district? Learn more about [career-ready programs from PLTW](#).