

PLTW



25 YEARS OF
REIMAGINING
EDUCATION

PLTW 2022 Annual Report

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OUR NORTH STAR:

Over the next 10 years, PLTW's goal is to drive **annual double-digit percentage growth** in our **reach to U.S. PreK-12 students in schools and beyond**. Fifty percent of PLTW students will be in our nation's **highest need schools**.

As we serve more students, we commit to driving strong student impact:

- **Increased interest/engagement** and/or **proficiency on key transportable skills important for college and career success** (with differentiated measures by grade band).
- Narrowed difference in average **outcomes across student groups**.

OUR MISSION: EMPOWER STUDENTS TO THRIVE IN AN EVOLVING WORLD.

Our pathways in computer science, engineering, and biomedical science:

- **Engage students in hands-on activities, projects, and problems.**
- **Empower them to solve real-world challenges.**
- **Inspire them to reimagine how they see themselves.**



To our network of partners,

As PLTW's new President and Chief Executive Officer, I look forward to serving our mission-driven organization that I've had the opportunity to be a part of for more than a decade. As a former teacher and administrator, I understand how important our work is to students and educators in communities throughout the U.S. I've also witnessed our work as a parent of three PLTW students.

In our 25-year history, PLTW has reached millions of students, tens of thousands of educators, and has brought real-world learning into PreK-12 classrooms. Our relevant learning experiences help students get excited about and prepared for future opportunities in life and work. Through our North Star, we are committed to serving more students, driving greater student impact, and supporting educators for the next 25 years and beyond.

What our annual report reveals is the power of our network. Even though we are still in unprecedented times, we continue to serve more students due to strong program growth and grant opportunities from our generous partners. In order to serve more students we must continuously improve our best-in-class curriculum and our professional development for our teachers. PLTW accomplished that this year with over 14,000 teacher training registrations, which is the highest ever in our 25-year history. We also deepened our commitment to educational equity and Diversity, Equity, Inclusion, and Belonging (DEIB) through curriculum enhancements, which is mission-critical to achieve our North Star.

As we reflect on our accomplishments this past fiscal year, we prepare for further innovation and strategic alliances to expand student opportunities, impact, and reach. Your support means more students inspired, teachers trained, and PLTW programs implemented. On behalf of the PLTW Team, thank you for playing an integral role in carrying out our mission by helping to bring real-world learning, educational equity, and positive outcomes for the next generation of students and educators across the country.

Thank you,

David L. Dimmett, EdD
President and Chief Executive Officer
Project Lead The Way



Project Lead The Way's Board of Directors:

Kurt Liebich, MBA. Board Chair. Chairman of the Board of Managers, RedBuilt; President and Chief Executive Officer of Redbuilt (Former).

Eunice Heath MBA. Board Vice Chair. Former Corporate Director of Sustainability, Dow, Inc.

James Rahn, MA. Board Secretary. President, Kern Family Foundation.

Chris Bradshaw MBA. CMO of Bentley Systems, Inc.

Adele Braxton-Fields MBA. Vice President of Financial Audit, Equifax.

David Dimmett, Ed. D., MBOE. President and CEO, PLTW.

Gabriela Gonzalez, PhD. Deputy Director and Operations Manager, Intel Foundation.

Stephanie Hill. Executive Vice President of Rotary and Mission Systems, Lockheed Martin.

Nick Ragone, JD. Executive Vice President and Chief Marketing and Communications Officer, Ascension.

Amy Ross, SPHR, SHRM-SCP. CEO and Founder of HumanKind HR.

We continue to see **STRONG GROWTH.**

While the COVID-19 pandemic still creates challenges for schools, our growth numbers indicate that schools and districts across the U.S. see the value of the PLTW curriculum. We are serving more students than ever and making progress toward our North Star. We have awarded over \$17 million in grants to jump-start implementation or expansion of PLTW programs for more than 1,500 schools.

98,462
Teachers Trained

15,489
Programs

12,818
Schools

2.27 Million
*Students**

*Estimated student count is determined from rostering data and modeling.



PLTW GRANTS

*\$17.6 million in grants
awarded to 1,519 recipients*

34%
rural

31%
urban

35%
suburban

68%
high need

PARTNER SPOTLIGHT

ArdaghGroup 



PLTW recognizes our newest Transformative Partners, Ardagh Group and NI.

In 2021, Ardagh Group made a \$12 million multi-year commitment to the PLTW Grants program as part of its global Sustainability Strategy. This investment will bring STEM career learning to PreK-12 students near Ardagh's U.S. facilities, strengthening the STEM-talent pipeline in those communities.

Since 2008, NI has partnered with PLTW to provide students across the U.S. with access to cutting-edge hardware and software and continues this commitment. In FY22, NI also supported schools in Austin, Texas, for the first year of a four-year, \$400,000 initial investment to expand access to PLTW programs among underrepresented and underserved students.

We deliver a best-in-class INNOVATIVE CURRICULUM.



PLTW LAUNCH PreK-5

In December 2021, we released an updated Animated Storytelling module for 1st Grade and an updated Grids and Games module for 2nd Grade. Both focus on student learning with the Use-Modify-Create framework and includes updated teacher support, a retooled table of contents in the PLTW Launch Log, and other enhancements. For 5th Grade, we updated the Robotics and Automation and Robotics and Automation: Challenge modules, including a new version of the robot chassis and resources that support the use of multiple VEX IQ kits.

3,759 Programs
56,819 Teachers trained



PLTW GATEWAY 6-8

This year, we updated and clarified the procedures of the activities, projects, and problems to improve the student and teacher experience for Energy and the Environment, Green Architecture, Magic of Electrons, and Science of Technology units. Beginning with the 2022-2023 school year, students in App Creators have the option to design and develop mobile app games.

5,039 Programs
19,557 Teachers trained



PLTW COMPUTER SCIENCE 9-12

A new Unit 4 option for Digital Electronics introduced the pi-top platform powered by Raspberry Pi, allowing students to program with Python and utilize more sturdy equipment. We developed and introduced a new PLTW Capstone course for open review. The course invites students from all three high school pathways to collaborate in one capstone experience under the instruction of a trained PLTW teacher. We will gather feedback through December 2022 before determining next steps.

1,226 Programs
4,316 Teachers trained



PLTW BIOMEDICAL SCIENCE 9-12

The PLTW Biomedical Science program now offers additional support for both students and teachers related to industry certifications or credentials in biomedical science. The resources provide information related to exams such as the Biotechnician Assistant Credentialing Exam (BACE), as well as links to other opportunities.

1,661 Programs
5,642 Teachers trained



PLTW ENGINEERING 9-12

In December 2021, we launched a new module, Game Design and Development, which utilizes the popular Roblox Studio platform allowing students to fill the role of game designer. Available for all PLTW high school students, the module explores real-life concepts such as game architecture, modeling, object-oriented programming, scoring, and game strategy.

3,804 Programs
19,374 Teachers trained



PLTW TEAM MEMBER SPOTLIGHT



ELIZABETH DAY

One of only two girls in her first PLTW Introduction to Engineering Design class, Elizabeth Day might have felt ostracized if it weren't for the support of her PLTW teacher. With his encouragement, Elizabeth continued in the program and maxed out on the PLTW Engineering classes she could take at Brockport High School in Brockport, NY. She even presented her capstone Engineering Design and Development project at PLTW conferences in New York.

Elizabeth went on to attend Rochester Institute of Technology, earning two degrees in industrial engineering and sustainable engineering. She said, "I enjoyed the structure of math combined with creativity and problem solving. My degrees set me up for a career I enjoy – one where I can apply technical knowledge but also approach tasks and challenges with an innovative mindset."

Joining PLTW in 2015 as an Instructional Developer, Elizabeth is now the Director of Production, PreK-8 for the PLTW Launch and PLTW Gateway products, and she leads the organization's strides in accessibility. Elizabeth uses her engineering skills every day. She said, "PLTW is a great place to work as an engineer because I get to apply my engineering knowledge and expand on my skills and experiences by working with professionals with tremendously diverse backgrounds. I also get to contribute to making an impact on students and teachers across the country exploring STEM fields."

"In my role at PLTW, I have the opportunity to shape another student's life the way that my two favorite PLTW teachers did for me."

We celebrate and engage our REMARKABLE NETWORK.

Through PLTW Program Recognition, we recognized more than 600 Distinguished Schools and Districts. We also honored the incredible work of PLTW educators across the country with our PLTW National Awards. We recognized 93 educators and hosted 10 localized events across the country to celebrate.

PLTW completed three Impact Profiles representing 15,522 PLTW students and counting. Impact profiles are case studies that highlight what we call evidence in action. We look nationwide for high-quality examples of what research and best practice tell us. The impact profiles are exemplars of where we see students being served and set up for future success. These impact profiles raise up the organizations, schools, and the communities that are involved.



ALUMNUS SPOTLIGHT



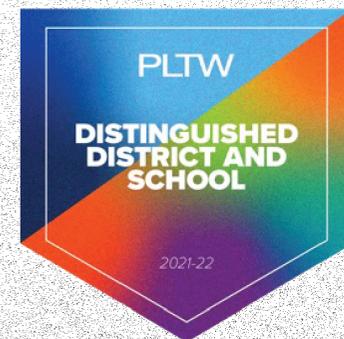
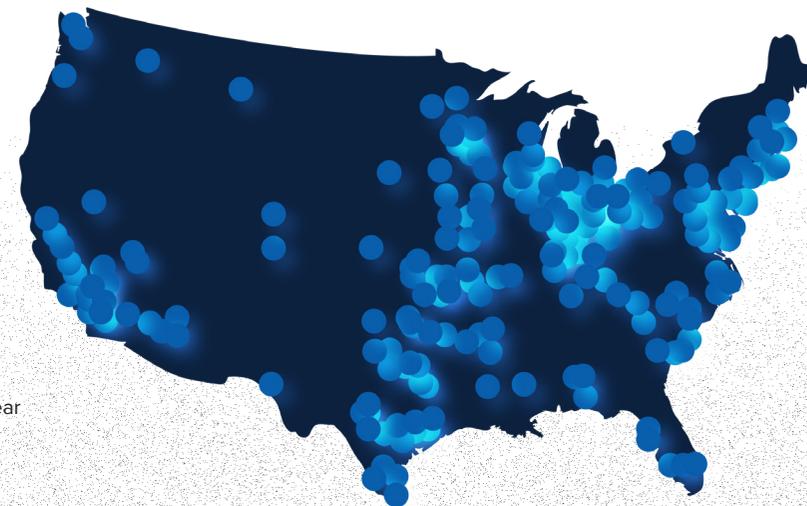
ALBERT MANERO

Albert Manero, PhD, first discovered PLTW courses as a ninth grader at East Lake High School, Tarpon Springs, FL. He discovered a passion for engineering and design, and he later translated that into multiple advanced degrees in aerospace engineering from the University of Central Florida. He and some friends founded Limbitless Solutions, a nonprofit organization dedicated to empowering individuals through personalized, creative, and expressive bionics at no cost to the families.

Through his organization, Albert “pays it forward” by employing multiple PLTW alumni in a multi-disciplinary internship program. Albert said, “My hope for ... the next generation of innovators is that when things are difficult or you feel like you’re struggling with a particular skill, you don’t give up. Engineering is so much more a test of resiliency and creativity than it is of doing well at the math classes or making sure your homework is done.”

“Having access to learn what engineering is and what those career paths look like early on is something that not everyone has. I was really fortunate to be able to learn about what the future could look like.”

PLTW Program Recognition Map



600 Distinguished Schools and Districts
284 Distinguished PLTW Launch Schools
136 Distinguished PLTW Gateway Schools
196 Distinguished PLTW High Schools

PLTW National Awards



Christine Davenport
PLTW Launch Teacher of the Year



Ralph Alvarado
PLTW Gateway Teacher of the Year



Edgar Monroy
PLTW Gateway Teacher of the Year



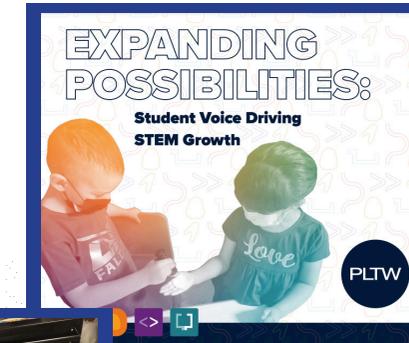
Randy Mills
PLTW Computer Science Teacher of the Year



Michael Thomas Karasch
PLTW Engineering Teacher of the Year



Danielle Weber
PLTW Biomedical Science Teacher of the Year



Los Fresnos Independent School District
Texas



Kansas City Public Schools
Missouri



Washington High School
Indiana

We commit more deeply to **EDUCATIONAL EQUITY.**

In 2021, PLTW established its official Diversity, Equity, Inclusion, and Belonging (DEIB) statement. While this was an exciting and necessary first step for our organization, we knew even as it was established that words don't matter without action. Since the inception of this foundational statement, PLTW has organized an internal DEIB advisory council comprised of a cross-sectional group of team members who help accelerate our DEIB efforts, activities, and strategic objectives. We instituted a speaker series to elevate and educate our team members, and we began celebrating cultural heritage holidays internally and externally.

Read our commitment statement online here:
<https://www.pltw.org/deib-commitment>



Committing to DEIB through curriculum enhancement.



Units/Modules/Courses were enhanced using the DEIB validation tool throughout all PLTW programs.



WE'VE AMPLIFIED OUR TEAM MEMBERS' VOICE TO

RECOGNIZE AND SUPPORT OUR WORKFORCE.



Jane Iglesias
UX DESIGNER

FUN FACT:
 Jane Iglesias is a real PLTW Team Member. She is awesome!



PLTW **UNLOCKING YOUR Voice**



Creation of an Internal Diversity, Equity, Inclusion, & Belonging (DEIB) Advisory Council



Enriched Cultural Awareness and Heritage Celebrations



Implemented New Team Member DEIB Onboarding Strategy

STUDENT SPOTLIGHT



ABHAY & MIHIR

When Abhay Pranav and Mihir Surlaker entered Bob Caprilles's PLTW Engineering Essentials classroom at Fremont High School in Sunnyvale, California, they had no way of knowing that the skills they would learn would apply across other disciplines, but that's exactly what happened. The two freshmen, both members of the school's Future Business Leaders of America (FBLA) club, partnered with other students on a submission to a Shark Tank competition. Mihir said, "In our class, we learned how to make systems thinking diagrams, which sparked the idea of making a diagram for our project." That diagram caught the judges' eye, and Mihir and Abhay won their school event, advancing to the next round of competition.

Eventually, the students earned a spot at the FBLA nationals competition in Chicago. Abhay said, "I realized how using the concepts I learned from PLTW has helped my team and I to win second in the state for this event, which lets us qualify for nationals. We are freshmen, who went against juniors and seniors in this event, and we still qualified."

"The skills I've learned from PLTW have been applied to everything I've seen when I look hard enough."

We prepare students to **THRIVE IN THE FUTURE.**

Success in today's world requires more. We know PLTW students are ready for more, and PLTW has committed to assessing and researching more of what matters most. We have an obligation to look at skills students are developing and how they match with what employers need.

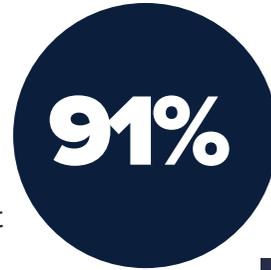
Data shows that measuring in-demand, transportable skills (problem-solving, critical thinking, communication, collaboration, and ethical reasoning) at the same time as subject-specific skills can mitigate the gender and racial bias that has been present in standardized testing for decades.

To support this, the PLTW Research Team focused its research agenda in four key areas this year:

- student interest and engagement
- transportable and technical skills
- PreK-12 and post-secondary outcomes
- teacher efficacy, skill, and satisfaction

The results of research involving PLTW teachers and students as well as partner research with Burning Glass suggest that PLTW students outpace non-PLTW students in skill areas employers seek.

In a study of female high school students in PLTW, 76% indicated they believe they can become an engineer and 62% indicated PLTW has encouraged them to major in STEM in college.



91% of STEM occupations request in-demand, transportable skills in a majority of openings.



84% of PLTW Gateway teachers claim their students have a better understanding of STEM opportunities because of their experiences in PLTW.

Lubin Rubin, L. (2017). PLTW female high-school students' supports and barriers in choosing a college degree.

What are students saying about PLTW?

High School Survey from End-of-Course Assessments 21-22

I can build an argument using logic and defend my point of view.



agree or strongly agree

I am able to examine the strengths and weaknesses of my solutions to problems.



agree or strongly agree

I try something different if my first approach to solving a problem doesn't work, even if it takes me longer.



agree or strongly agree

I am able to examine the strengths and weaknesses of my own views on a topic or issue.



agree or strongly agree

"If PLTW was never a thing, if it never existed, I would not have become the person I am right now. I would not have learned robotics. I would not like coding. I would never have discovered something I really love."

- Gateway Student



BOARD MEMBER SPOTLIGHT

EUNICE HEATH



Eunice Heath worked at Dow Chemical Company for more than 30 years. As Corporate Director of Sustainability, she was responsible for the planning and implementation of the Dow 2025 Sustainability Goals, sustainability integration, and next generation strategy development. She has served in numerous roles, including senior director of government affairs (Northeast) and corporate citizenship, global general manager of Dow's home and personal care division, a three-year assignment in Switzerland as global business director, and a leader on the Dow corporate inclusion council. She also served on the environmental justice steering committee. An advocate for mentorship and inspiring the next generation of scientists, Eunice actively shares her educational and career experiences with students of all ages.

Eunice was instrumental in developing a comprehensive STEM education strategy at Dow, which led to a summer immersion program sponsored by the National Society of Black Engineers (NSBE). It was then that she learned about PLTW and joined the PLTW Board of Directors in 2012, where she now serves as Vice Chair. Through her leadership, Dow and PLTW have partnered to extend grants to elementary and middle schools seeking to implement PLTW programs near five Historically Black Colleges and Universities (HBCUs) in alignment with Dow's commitment to enhance the Black STEM talent pipeline.

"Project Lead The Way is enabling the next generation workforce to be ready for the challenges and the opportunities to enable a sustainable future. And that all comes from the strong foundation that PLTW provides for teachers as well as students."

We elevate expectations for EDUCATOR EDUCATION.

Providing an exceptional educational experience for our educators continues to be a top priority. Core Training is a robust and interactive professional development opportunity taught by expertly trained PLTW Master Teachers. They facilitate and deliver the online learning experience through a dynamic mix of live sessions, as well as interactive and collaborative, cohort-based opportunities that help build lasting professional learning communities. Credentialed teachers leave Core Training feeling empowered to deliver the meaningful learning experiences our students deserve.



500+ Master Teachers

14,000+ Training Registrations

Highest in PLTW's 25 year history!

200,000+ Total credits issued to educators

11,000+ PLTW Core Training Participants

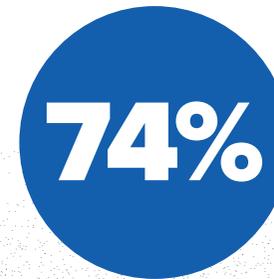
"Prior to PLTW, I was facing burn out in my teaching career. PLTW made teaching and learning fun again for both myself and for my students."

-Launch/Gateway teacher

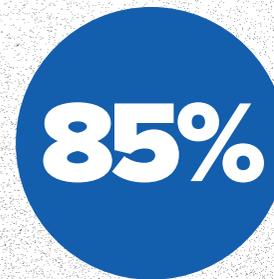
"I wish more classes would look more like PLTW classes. Students learn how to fail and problem solve to find solutions; they learn persistence & perseverance. Most days my students are working harder at learning the content than I am at teaching it - I get to sit back and coach them through."
-Gateway teacher



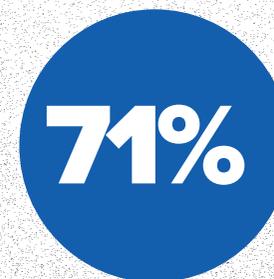
were very or somewhat likely to recommend PLTW to a fellow teacher.



report that Core Training made them more effective as a teacher.



are confident in using PLTW Core Teacher as Facilitator and APB instructional approaches.



of teachers report that Core Training made them more effective at teaching students who are less engaged in STEM.



EDUCATOR SPOTLIGHT



AMY BALDWIN

Teachers and administrators across PLTW's network of schools do amazing things every day to impact lives of their students. Each year, we recognize those who have made significant impacts in their classrooms, schools, and communities through the PLTW National Awards. We honored Amy Baldwin with the 2021 Robert & Patricia Kern National Teacher of the Year Award for her strong record of delivering an inspiring and empowering student experience in the PLTW Gateway program at Oakbrook Middle School located in Ladson, South Carolina, where she has been a teacher for 21 years. Amy was chosen from nominations received from across the country.

"Amy walks into her classroom each and every day with a smile on her face and a passion for what she teaches. The students are eager to learn and collaborate with one another in a technology enhanced environment."

- Kimberly Boutin, Principal

FISCAL YEAR 2022 FINANCIAL REPORT

Total Revenue (including Contributions)

\$115.7 mm

Total Grants Committed for Schools

\$17.6 mm

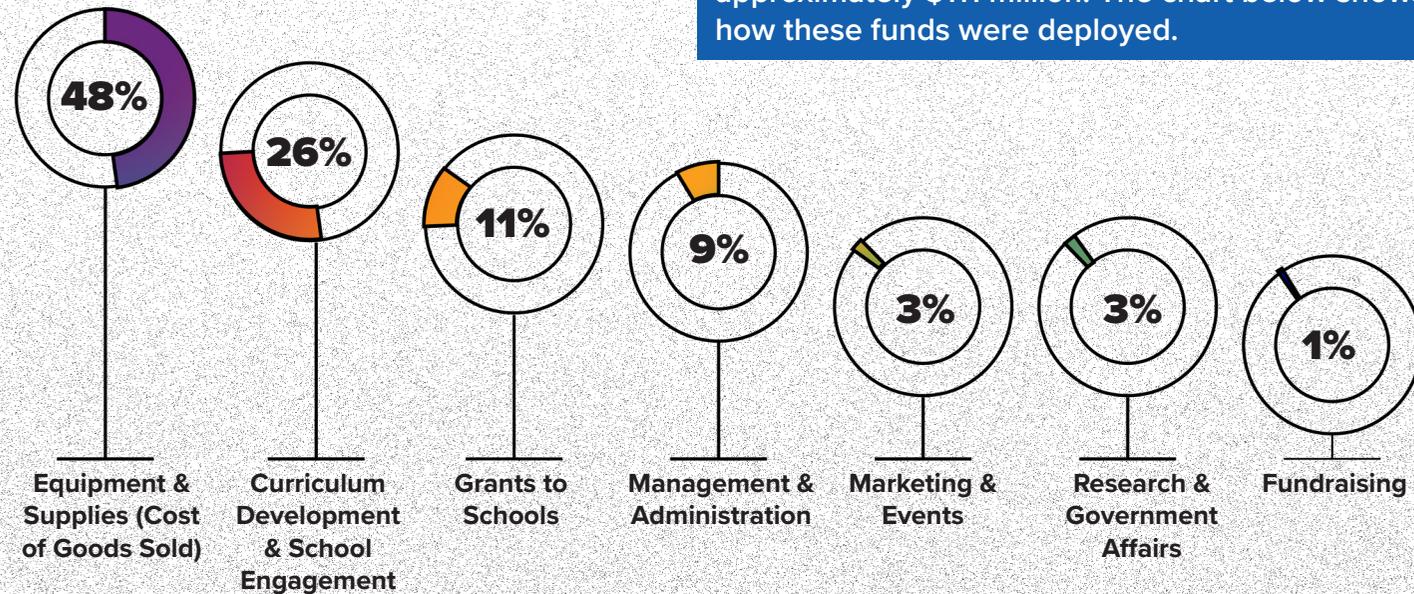
Total Expense (including Grant Releases)

\$110.7 mm

Total Funds Raised

\$12.4 mm

For fiscal year 2022, PLTW's total expenses were approximately \$111 million. The chart below shows how these funds were deployed.



PLTW EXPENSES

INFLUENCING POLICY

Through influence, relationships, and support of policy makers, PLTW's Policy and Government Relations Team is focused on developing and implementing a policy framework that supports PLTW and our North Star initiatives in the following ways:

Pursuing equity and inclusivity

Representing trends in the education and workforce landscape

Informed by PLTW research

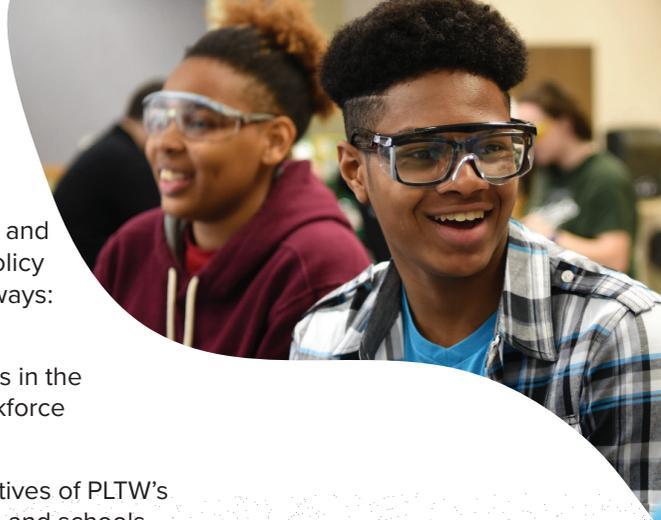
Aligns to the objectives of PLTW's network of districts and schools across the country

FY22 WINS:

The team is on their way to completing all 50 legislative session reports. We created 29 end-of-session reports that document relevant legislation enrolled as law for states. Anticipate completing the rest of the reports once the remaining states' legislative sessions have ended and their governors have responded.

- MI, CA, FL: Secured/progressing funding for Computer Science Professional Development, including protecting a \$10 million line item.
- OH, CA, NM: Supported legislation related to improving overall STEM learning opportunities and College and Career Ready pathways
- MI, OH, CA, LA, MN, KS: Passed/making progress on legislation related to CS requirements
- Influenced policy at the federal level. PLTW educated Congressional Staff Members on the importance and nature of STEM ecosystems. These conversations played into the passing of the CHIPS Act. The team provided an analysis of this federal legislation, highlighting potential opportunities for PLTW and its network.
- PLTW engages with local STEM ecosystems in a number of states, including Michigan, California, Arizona, Texas, as well as the Kansas City area and others.

Enacted legislation and policy in key states. PLTW has logged action on filed legislation in nine states: CA, FL, IN, KS, LA, MI, MN, NM, and OH.



PLTW Transformative Partners

“Transformative Partner” is PLTW’s highest designation of partnership, indicating an organization’s exceptional commitment to increasing access to the most relevant and high-quality STEM curriculum for students across the country. Transformative Partners support the advancement of PLTW’s mission and goals in a variety of ways, including supporting the PLTW School Grant program, funding special projects and initiatives, advising on curriculum and training, and supporting students and educators through special opportunities.



PLTW Partners

PLTW’s diverse partnerships include Fortune 500 corporations, local businesses, foundations, nonprofits, and more, and partner organizations support PLTW in a variety of ways. We applaud these partners for their dedication to high-quality STEM and career learning.

***Those listed in bold made new financial commitments to PLTW in 2021-22.**

3D Molecular Design

3M

Adecco

Afinia 3D

Amcor Foundation

American Structurepoint

ArcelorMittal/Nippon Steel Calvert

Arconic Foundation

Arthur F Blanchard Charitable Trust

Ascension

Astellas USA Foundation

Atlas Holdings, LLC

BAE Systems

Banker Steel Company, LLC

Bayer Corporation

Beckman Coulter

Bio Digital

Boeing

Boston Scientific

Burns & McDonnell

Burns Engineering

Carolina Biological

Cell Zone

Charles and Lynn Schusterman Family

Philanthropies

Choctaw Nation of Oklahoma

CME Group Foundation

Competitive Power Ventures, Inc

Cooperative Energy

Dow Company Foundation

Dremel DigiLab

Edvotek

Electronix Express

Entergy Charitable Foundation

EQT Foundation

Finch Paper LLC

Fisher Science Educationz

General Electric

GlaxoSmithKline

Granite Shore Power

Hologic

Iconex, LLC

Indiana Commission for Higher Education

Indiana Department of Education

Intelitek

Iowa Governor's STEM Advisory Council

J.M. Huber Corporation

Johnson Controls

Jones Bartlett Learning

Kern Family Foundation

Lab-Aids

Leidos

Los Angeles Lakers Youth Foundation

Luna Language Service

Marcal Manufacturing, LC

Mass STEM Hub

Massachusetts Governor's Advisory

Council on STEM

Massachusetts Life Sciences Center

Medtronic Foundation

Micro:bit

Motus, LLC

Nevada Department of Education

New Orleans Saints

NextEra Foundation

Novipax

One8 Foundation

Pentair

Pi-top

RedBuilt

Rhode Island Department of Elementary and Secondary Education

Roblox

Roche Corporation

Rockwell Automation

Samsung

SENEDIA - Southeastern New England

Defense Industry Alliance

Snap Circuits

Solid Professor

STEM Premier

Strada Education Network

Total Energies

Tennessee Department of Education

Tesla

The Goizueta Foundation

The Harry and Jeanette Weinberg Foundation, Inc.

Twin Rivers Paper Company LLC

Ventana Medical Systems, Inc.

Veritas Steel LLC

Vernier

Vex

Wards Science

Weyerhaeuser

Winston Plywood & Veneer

Your Image Works

Cripe

Zahourek Systems



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