

PAsmart

2024-2025 IMPACT REPORTS



Demetrius Roberts, Ed.D.
Special Consultant to PDE for STEM & Computer Science



pennsylvania
DEPARTMENT OF EDUCATION



This PAsmart Grant annual report provides a brief overview of the programs funded through the PAsmart grant in the state of Pennsylvania. The primary focus of the grant funded program is to promote diversity and student success in the STEM and Computer Science fields. This is accomplished in various ways through multiple types of programs.

This report provides the objectives, overview and outline of each project funded by the PAsmart grant, as well as the impact and outcomes of the programs. As illustrated in this report, the projects significantly impacted both teachers and students by deepening awareness, enhancing engagement, and expanding participation in STEM and Computer Science learning – both within school and in the broader community.

Through professional learning, hands-on experiences and real-world applications, the program aimed to cultivate lasting interest and confidence in STEM and Computer Science, which positively shapes future academics and career pathways.





Table of CONTENTS

PASmart Overview	05
Summary of Portfolio of STEM Initiatives	10
Chief Science Officers Program	12
Governor's STEM Competition	14
Remake Learning Days (RLD)	16
CSin PA Technical Assistance	20
SSoS: STEM SoW	24
STEM in PA	32
a. Artificial Intelligence (ISTE)	32
b. BrightNow	34
c. Computational Thinking (CT) - Project Tomorrow	36
d. PennSEL - WestEd	38
e. Philadelphia Ed Foundation Support (PEF)	40
f. Student-Centered Learning (SCL)	42
g. Environmental Literacy & Sustainability (ELit Hubs)	46
i. Southeast Region	47
ii. Southcentral Region	48
iii. Southwest Region	49
iv. Northeast Region	50
v. Northcentral Region	51
vi. Northwest Region	52
PARSE - 3D Teaching & Learning PSU	53
Pennsylvania Statewide STEM Ecosystem (PSSE)	54



Executive Overview

Pennsylvania's PAsmart STEM & Computer Science (CS) programs represent a strategic state investment in equity, innovation, and workforce readiness. This report highlights the coordinated statewide work of PDE, the 29 Intermediate Units (IUs), PaTTAN, and national partners, including WestEd, ISTE/ASCD, and Project Tomorrow.

These initiatives are distinct from the \$10 million competitive grant process. Together, they form the backbone of Pennsylvania's strategy to align education and workforce goals and ensure that every learner, regardless of geography or background, has access to high-quality opportunities.

SCALE OF INVESTMENT AND REACH

In 2024–2025, PDE directed \$9.3 million across 23 coordinated initiatives implemented through the statewide IU system. This investment translates into significant reach across Pennsylvania:

- **190,000+** educators and **900,000+** students participated in programs supported through the STEM State System of Support (SSOS).
- An additional **20,000+** students and educators were directly impacted through specialized statewide projects.
- **213,004** students in grades 7–12 are now enrolled in computer science courses statewide, reflecting sustained growth supported by CSinPA initiatives.

These numbers demonstrate not only the scale of the investment but also the power of a coherent statewide system that builds capacity while delivering direct impact.



Executive Overview

IMPACT ON STUDENTS

At its heart, PAsmart is about students. Programs are designed to give young people the confidence, skills, and opportunities they need to thrive in the future workforce.

- Governor's STEM Competition challenged more than 270 students this year to design solutions that



improve the quality of life for Pennsylvanians, with projects ranging from biomedical prototypes to renewable energy solutions.

- Remake Learning Days connected 254 schools and 175 LEAs with families through more than 800 free events across the Commonwealth. Students created 5,410 career readiness artifacts, with 88% produced by K–5 learners, underscoring early engagement in STEM pathways.



- The Chief Science Officers Program engaged 491 student leaders who now act as ambassadors for STEM in their schools and communities. Participation has increased 11x since its launch, with students reporting greater confidence in collaboration and leadership.



- BrightNow engaged early learners through music and movement while embedding STEM and CS concepts in classrooms.



Student Callout: **213,004** students enrolled in computer science statewide — a milestone that positions Pennsylvania as a national leader.

Executive Overview

IMPACT ON EDUCATORS

Educators are the linchpin of sustainable change. PAsmart ensures they receive scalable, evidence-based professional learning aligned to PDE's vision for high-quality instruction.



- CSinPA used a train-the-trainer model across 21 IUs, multiplying local capacity to provide professional development. Over 4,400 educators participated in CSinPA events, including new offerings in AI and computational thinking.



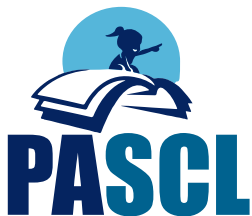
- Project Tomorrow's Computational Thinking initiative engaged 41 IUs and 16 LEAs, with 99% of participants affirming the direct applicability of content to their work.



- ISTE/ASCD's AI professional learning built educator understanding of generative AI, with 79% of Cohort 1 completing the program and strong demand for district-level adoption.



- PennSEL (WestEd) supported more than 160 district and IU leaders with resources and toolkits for STEELS implementation. 93% of participants reported gaining valuable knowledge and clarity on selecting high-quality instructional materials.



- Student-Centered Learning (SCL) Network now includes 97% of IUs statewide, equipping leaders and teachers to personalize instruction and increase student agency.

Educator Callout: **190,000+** educators across the Commonwealth participated in PAsmart-supported programs in 2024–2025.

Executive Overview

IMPACT ON WORKFORCE AND COMMUNITIES

- STEM Ecosystems, facilitated by IUs, engaged over 1,000 members statewide, including employers, higher education, nonprofits, and government. These partnerships address regional workforce challenges and create career-connected opportunities for students.



- Environmental Literacy & Sustainability Hubs hosted regional symposia and provided mini-grants, supporting schools in aligning instruction with workforce priorities in sustainability and green industries.



- The Pennsylvania Statewide STEM Ecosystem (PSSE) convened leaders from 14 regional ecosystems, hosted a statewide leadership summit, and built a pipeline of STEM ecosystem leaders to sustain future work.



Workforce Callout: **900,000+** students engaged in learning related to PAsmart STEM & Computer Science programs through the STEM SSOS.

Executive Overview

SUMMARY

The 2024–2025 PAsmart STEM & CS in PA portfolio illustrates the power of statewide alignment. Through a \$9.3M investment, PDE, IUs, PaTTAN, and national partners have scaled access to STEM and CS learning while directly impacting students and educators in every region.

This work is more than grant-funded programming — it is a strategic engine driving equity, innovation, and workforce readiness across the Commonwealth. The initiatives that follow demonstrate how Pennsylvania is preparing students for success in both today's classrooms and tomorrow's careers.



Summary of Portfolio of STEM Initiatives

Primary Contact:

Demetrius Roberts, Ed.D.

Special Consultant to PDE for STEM & Computer Science

23 Initiatives
\$9,300,082

OBJECTIVES

- Invest strategically in initiatives that drive economic growth and expand education & workforce training opportunities.
- Deliver measurable, successful outcomes for Pennsylvania's students, workers, businesses, and communities.
- Enhance coordination and alignment across education and workforce development programs, services, and funding streams.
- Strengthen inter-agency and cross-sector collaboration to improve STEM education and workforce outcomes across Pennsylvania.

PRIMARY STREAMS OF WORK

- Enriching STEM Education
- Expanding Computer Science
- Promoting Student-Centered Learning
- Advancing Educator Training and Competencies

KEY FACTS:

20,000+

Educators and students gained valuable experience through programming.

200,000+

Computer Science course enrollment statewide in grades 7-12.

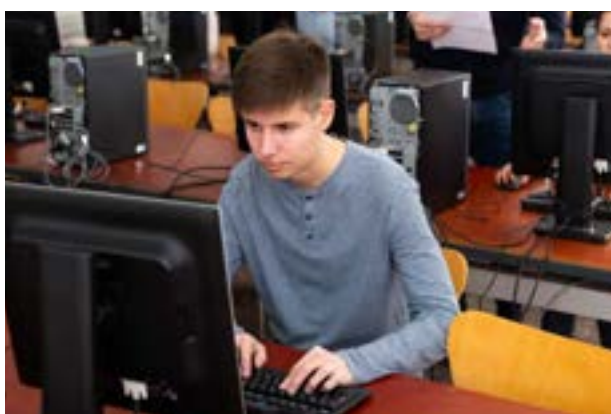
PROJECTS

1. Chief Science Officers (CSO) Program
2. Governor's STEM Competition
3. Remake Learning Days (RLD)
4. CSinPA Technical Assistance
5. STEM in PA
 - a. Artificial Intelligence
 - b. BrightNow
 - c. Computational Thinking (CT) – Project Tomorrow
 - d. PennSEL–WestEd
 - e. Philadelphia Ed Foundation
 - f. Student-Centered Learning
 - g. Environmental Literacy & Sustainability (ELit Hubs)
 - i. Southeast Region
 - ii. Southcentral Region
 - iii. Southwest Region
 - iv. Northeast Region
 - v. Northcentral Region
 - vi. Northwest Region
6. PARSE – 3D Teaching & Learning
7. Pennsylvania Statewide STEM Ecosystem

PAsmart Grant Overview



This PAsmart Grant annual report provides a brief overview of the programs funded through the PAsmart grant in the state of Pennsylvania. The primary focus of the grant funded program is to promote diversity and student success in the STEM and Computer Science fields. This is accomplished in various ways through multiple types of programs. This report provides the objectives, overview and outline of each project funded by the PAsmart grant, as well as the impact and outcomes of the programs. As illustrated in this report, the projects significantly impacted both teachers and students by deepening awareness, enhancing engagement, and expanding participation in STEM and Computer Science learning – both within school and in the broader community. Through professional learning, hands-on experiences and real-world applications, the program aimed to cultivate lasting interest and confidence in STEM and Computer Science, which positively shapes future academics and career pathways.



CSO Program

Pennsylvania Chief Science Officer



EST: JULY 2022

The CSO Program is intended to promote and enrich engagement in STEM in PA via a network of named student ambassadors. The student ambassadors, known as “Chief Science Officers,” are affiliated with an IU--i.e., at least one CSO per IU. The CSO program is more than a club—it's a life-changing experience. It strengthens leadership, builds confidence, and connects students with the real world of STEM. Advisors, alumni, and students all report lasting benefits, making it a powerful model for youth engagement in science and community leadership.

25
IUs

121
LEAs

491
Student CSOs

OBJECTIVES

- Build a diverse community of student leaders in STEM.
- Promote student engagement in STEM and strengthen collaboration among CSOs.
- Enhance school STEM environments and increase awareness of STEM career pathways.
- Elevate student voices to advocate for STEM education within their communities.



Learning more about science and the hands-on STEM activities helped me with my decision to study microbiology.

-CSO

PRIMARY CONTACT

Stephanie Schwab, Ed.D
www.pa-cso.org



Watch how the CSO program at Palisades High School empowers students passionate about STEM

<https://pa-cso.org/palisades/>



IMPACT INDICATORS

Participation & Growth:

11X

The number of students enrolled since the program inception.

6X

The number of participating districts since the program inception.

Networking:

102%

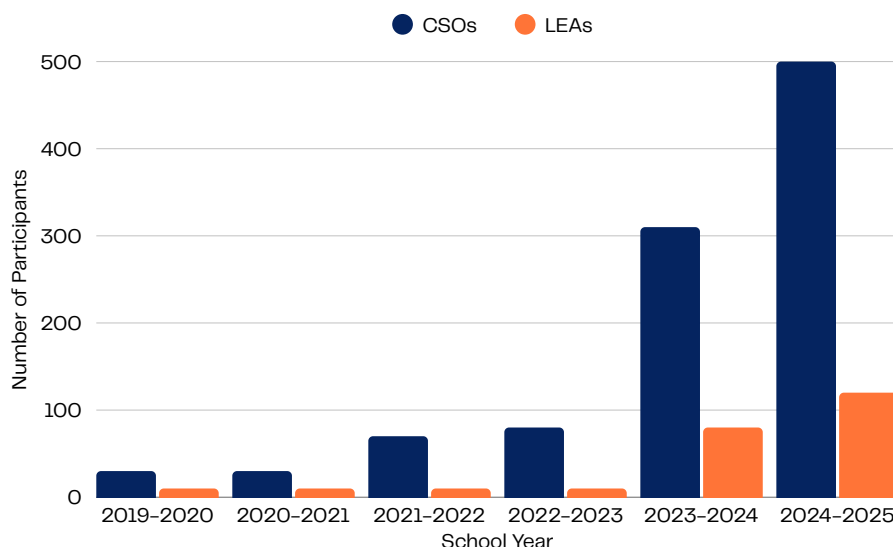
Increase in CSOs reporting that the program significantly expanded their peer and mentor networks.

Partnerships:

>95

IU partnerships delivered real-world STEM educational experiences through industry-led sessions.

CSO Program Participation



By being in the CSO Program, I have seen so many different opportunities of where things are actually being applied instead of just saying that I know what an engineer does.

-CSO

It's an opportunity for them to network and grow, learn about STEM careers and really try to influence those around them to have a better understanding of what STEM is and how it can be used in anything they do in their life.

-Stephanie Schwab
Regional Lead



EDUCATIONAL IMPACT METRICS

Professional Learning:

29

CSOs participated in national and/or state-level conferences or professional STEM initiatives as attendees or presenters, which contributes to knowledge exchange and representation of youth in STEM leadership spaces.

Leadership Support:

~45

Hours of support provided to each CSO with the opportunity to attend the Leadership Training Institute (LTI).

Student Experience:

36.5%

Increase in positive student opinion of their ability to collaborate with other CSOs after participating in the program.



"I've seen students grow as leaders, communicators, and problem-solvers. It's been inspiring."

-CSO Advisor



4.7 out of 5

CSO Advisor Experience:

Advisors rated relationship building highest for its impact on a supportive, engaging experience.



4.4 out of 5

CSO Alumni Experience:

Alumni ratings show significant growth in collaboration and other key life and STEM skills, highlighting the program's impact beyond the classroom.

Governor's STEM

Competition

EST: SEPT 2013



The PA Governor's STEM Competition challenges teams of high school students (in public, charter, or private schools in PA) to research, design, and present a device or project that can make the quality of life better for Pennsylvanians by fulfilling real-world needs.

Learn more:

[GOVERNOR'S STEM: A CLOSER LOOK](#)



75

Registered Teams
in 2025 with up to
5 students each

270+

Student
Participants

60-120

Average Teams that
Participate Annually

OBJECTIVES

- Create opportunities for students to apply STEM-classroom learning
- Requires collaboration between schools and the community
- Students research, develop, and present a device or project that can improve the lives of Pennsylvanians and can accomplish practical tasks

PRIMARY CONTACTS

Christopher Cherny
Tara Russo

PaTTAN
Pennsylvania Training and Technical Assistance Network



Sustained Interest & Participation:

**40 to
60%**

of teams had
previous year
participation.

~100

students advanced
to the in-person
finals (20 teams).

Student Experience:

Participant feedback from the 2025 Pennsylvania Governor's STEM Competition was overwhelmingly positive, reflecting the competition's strong impact on student engagement and learning.

Students had overwhelming positive feedback in the following areas:

- Collaborative Teamwork
- Enriching State-Level Experience
- People's Choice Award
- Professional Judging Experience



GOVERNOR'S 2024 STEM COMPETITION GRAND CHAMPIONS

The team constructed a biomedical prototype that measures pulmonary functions and streams live data to physicians during remote Telemedicine visits.

“It’s a competition that has evolved over the nine years—from schools entering with no idea what to expect, to advisors and teams who are now much more informed. It really challenges students to produce top-notch projects. It’s not your typical science fair; the projects show how students have applied the engineering process. It can be stressful, but for the most part, the kids have a lot of fun, they’re challenged, and they really want to do a good job.”

—Dr John Janasik
Bishop Shanahan High School Team Advisor

Remake Learning Days (RLD)



EST: JULY 2023

Remake Learning hosts a large-scale STEM-focused, exploratory-learning festival across the globe, each spring. In PA, there are more than 500 host sites for conducting public STEM experiments, maker-space activities, etc. The host sites are museums, universities & industrial partners.

Learn More:



remakelearningdays.org



[Watch RLD in Action!](#)



STATEWIDE REACH

254

Schools

175

LEAs & Nonpublic
entitites

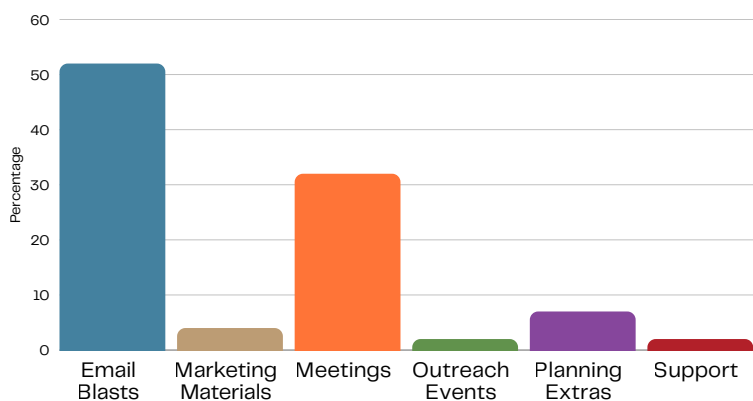
30%

Of all PA public
schools participated
in the RLD program

OBJECTIVES

- Offer free events hosted by schools, museums, tech startups, & more.
- Highlight opportunities for youth to develop creativity & curiosity.
- Promote innovative, hands-on, relevant, educational opportunities.
- Include youth of all ages, families & community members.

Regional Lead Activity Percentage by Type



PRIMARY CONTACTS

Dorie Taylor
Tyler Samstag



IMPACT INDICATORS

Backpack Challenge:

30,500

Number of students that participated in the Backpack Challenge.

Artifacts:

5,410

Total artifacts submitted by students to include in Career Readiness Portfolios

2,548

Students submitted artifacts for their Career Readiness portfolios from participation in discovered & Mega Events

93%

Of artifacts were submitted by students who attend public school

25

Schools received banners for submitting 100 or more artifacts

Outreach:

41,876

Contacts made during RLD festival.

>1000

Distributions of the RLD newsletter.

Early Learners:

88%

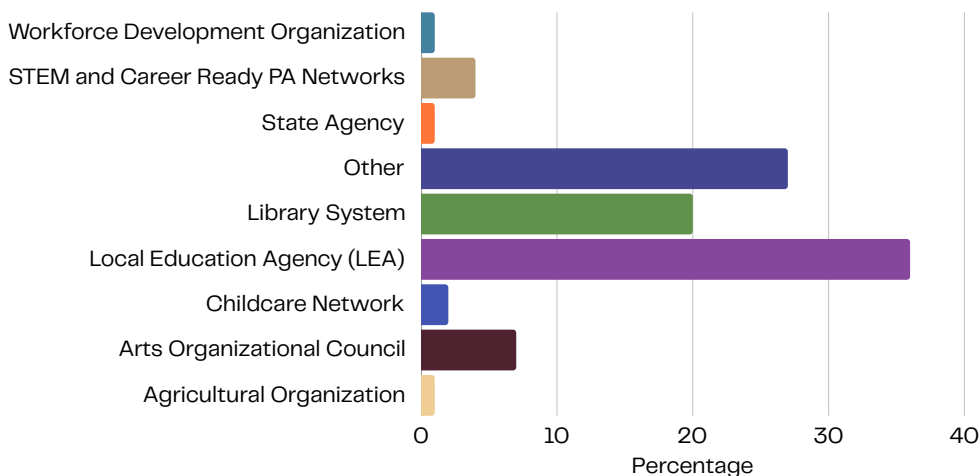
Of all submitted artifacts were produced by K - 5 students, demonstrating a high level of early learner engagement

Ambassadors:

74%

Increase in the number of youth ambassadors from the previous year

Partnership Percentage by Type



The thing about learning together with others is that it sparks an atmosphere that becomes curious, an atmosphere that becomes joyful, an atmosphere that sparks an interest and a passion and really prompts someone to explore something more.

It's that spark that is so essential to Remake Learning Days.

—Gregg Behr
Executive Director of the Grable Foundation and Co-Founder of Remake Learning



MAKING MEANINGFUL CONNECTIONS IN CREATIVE LEARNING ENVIRONMENTS

“Because we are working collectively, we have the ability to make ideas real. We see legislators as partners. When elected leaders can see how their funding is executed by PSSE’s collective impact model, they realize just how effective and scalable this approach is to long-term, meaningful change.”

-Alexandra Konsur-Grushinski

Allowing for the kind of creativity and outside-the-box thinking that can help make meaningful connections between education and workforce is one of the greatest benefits of the PAsmart grants. Yu-Ling Cheng and Tyler Samstag from the Remake Learning initiative stressed the importance of bringing educational experiences into non-traditional learning spaces. The Remake Learning Days festival encourages educators to get creative about where and how STEM learning can take place. Their goal is to create learning opportunities that show students and their families all the ways STEM can apply in different situations. Some of Cheng and Samstag’s favorite offbeat learning locations have included rural farms, ice cream parlors, barber shops, community swimming pools, and even a dance studio.

“We think about barriers to STEM educational experiences like time, money, and distance, then we work hard to make sure that there are events in everyone’s backyard.” Cheng explained enthusiastically. Samstag added, “We think to ourselves, ‘Let’s look for learning spaces that people might not think of and how we might elevate those.’”

This idea that originated in southwestern PA now spans nearly every county in the state, boasting 844 events—many of them intentionally hosted in rural or economically challenged communities to ensure equitable access. As a result of this intentionality, Cheng and Samstag have watched partnerships form between schools and employers in the community.

As champions of collective impact, creating opportunities to unite diverse partners such as schools, industries, nonprofits, and government around long-term goals is the focus of the STEM Ecosystem model, as explained by Alexandra Konsur-Grushinski, Director of PA Statewide STEM Ecosystem (PSSE).

In an interview, she shared a story about a PA-based parts manufacturer that supplied a defense contractor. The director of the operation expressed worry about the future of his workforce, since so many of his employees were close to retirement age and few students were learning the skills necessary for his industry. As Konsur-Grushinski listened, she recalled a local college with a trade school program and was able to make an effective connection between educators and an employer. The shared impact of the partnership between the PA-based parts manufacturer and the technical college is one example of the STEM Ecosystem collective impact model in action.

STEM Ecosystems unite cross-sector partners to achieve more together than anyone could accomplish alone. In this way, they maintain and strengthen the relationships that sustain efforts like Remake Learning Days Across PA. At the same time, Remake Learning Days provides a ready-made structure that creates opportunities for Ecosystems to galvanize around shared goals. Together, these mutually reinforcing programs demonstrate how collaboration leads to positive, long-lasting change.

CSinPA

Technical Assistance



EST: 2018

The CSinPA Program consists of a portfolio of projects aimed at increasing the diversity and reach of students and teachers participating in computer science in Pennsylvania. Some of these projects involve students (e.g. robotics) and some of them involve educators (e.g. certification pathways).

Learn More:
[CSinPA Program](#)



4400+

Participants in CSinPA Programs & Events

OBJECTIVES

- Increase and diversify the number of students & educators learning Computer Science.
- Increase the number of middle & high schools offering Computer Science.
- Increase the number of certified Computer Science teachers in grades 7 - 12.
- Increase the number of LEAs with a comprehensive Computer Science Program.

PRIMARY CONTACTS

Sara Frey
Sergio Anaya

90%
of parents want
their child to
study computer
science



PaTTAN
Pennsylvania Training and Technical Assistance Network



879

Online Community of Practice Members

12

Evidence-based professional development programs and technical assistance in STEM and Computer Science were delivered to IUs and LEAs across Pennsylvania to expand access and increase the number of K–12 students and LEAs actively engaged in computer science education.

CS Educator Toolkits and Family Toolkits are available with resources for CS Education, Certification, College and Career Pathways, and Family & Community Engagement

PROFESSIONAL LEARNING PROGRAM METRICS

The CS Professional Learning for IUs employed the Train-the-Trainer (ToT) model, which has significantly enhanced the capacity of IUs for local implementation of the CSinPA professional development programs and local initiatives. Through a series of targeted training sessions, the program included:

21 IUs and 26 facilitators in the CS Script Training

The Drone training reached 34 participants across 17 IUs

The TACTICS Team includes members from 21 IUs

CSinPA is a growing network of educators, leaders, and vested partners striving for equitable K-12 computer science (CS) education in Pennsylvania.

The CS Professional Learning for Local Education Agencies (LEAs) has played a pivotal role in advancing equitable and sustainable computer science programs across Pennsylvania. The CSinPA program provided a diverse set of professional learning opportunities that include:

Training	Participation	LEAs
Script Training	42 participants	6 LEAs
K–8 Foundational Learning	25 educators	24 LEAs
Micro-credentials	54 participants	
7– 12 Pathways	28 educators	30 LEAs
Drones Cohorts	2 participants	2 LEAs
Comprehensive Support		4 LEAs
Music Program	8 music teachers	
7 – 12 Pedagogy Pathway	3 participants	3 LEAs
Westmoreland County K–12 Pathways		10 LEAs



SUPPORTING EVERY LEARNER'S STEM POTENTIAL

“It’s really amazing to see how the students took to this project. You could see them putting serious thought into their ideas. It also created bonds between students who might not normally be in the same social groups.”

-Steven Sheirer

When asked to share a meaningful moment in her career, Sara Frey, state lead for the Computer Science in Pennsylvania (CSinPA) initiative at the Pennsylvania Training and Technical Assistance Network (PaTTAN), barely needed to pause. Her guiding focus is computer science (CS) accessibility and inclusion, and the story she shared was about a young man returning to her summer camp program. He has disabilities that—prior to the exposure and accommodations provided by PaTTAN’s Summer Youth Program—might have made his favorite aspects of CS unavailable to him. However, he returned that particular summer not only with clear enthusiasm, but also with stories from his parents about how he’d sought out additional CS learning opportunities on his own during the school year.

Frey’s story is one of many found among dedicated educators supported through PAsmart that reinforce the importance of inclusion. When educators and students are working together to create inclusive spaces and meaningful opportunities for every learner to participate in STEM, everyone benefits.

Another Pennsylvania educator working to make inclusivity and adaptability a central pillar of his work is Steven Sheirer, Part of the TACTICS team working under CSinPA. He described an initiative that challenged high school students to think creatively about adapting toys and learning tools for peers with high support needs. The project not only encouraged problem-solving but also strengthened relationships among students, highlighting how inclusive design can spark both empathy and innovation.

Both Frey and Sheirer are passionate about the importance of inclusivity. They have seen firsthand how opening doors to learners of all abilities has been a net positive across Pennsylvania. They are working hard to increase both the representation of student voices across all demographics, as well as opportunities for student leadership and mentorship in STEM and CS.

STEM SoW

State System of Support:
STEM Statement of Work

EST: 2017

A future state where all students, from Pre-K through postsecondary education, have access to high-quality STEM and computer science programs that build essential career readiness skills—delivered by well-equipped educators empowered to provide rigorous, inclusive instruction across the entire P–20 continuum and into the workforce.

190K +

Educator Participation

900K +

Student Participation

OBJECTIVES

- Increase participation in K–12 STEM and Computer Science education
- Enhance STEM and Computer Science partnerships and programs
- Continue and expand support for the PA STEELS Standards
- Assist LEAs in scaling universally-designed STEM & CS learning

PRIMARY CONTACTS

Kelsi Boyles
Rebecca Gibboney
Heather Heimer
Ben Smith

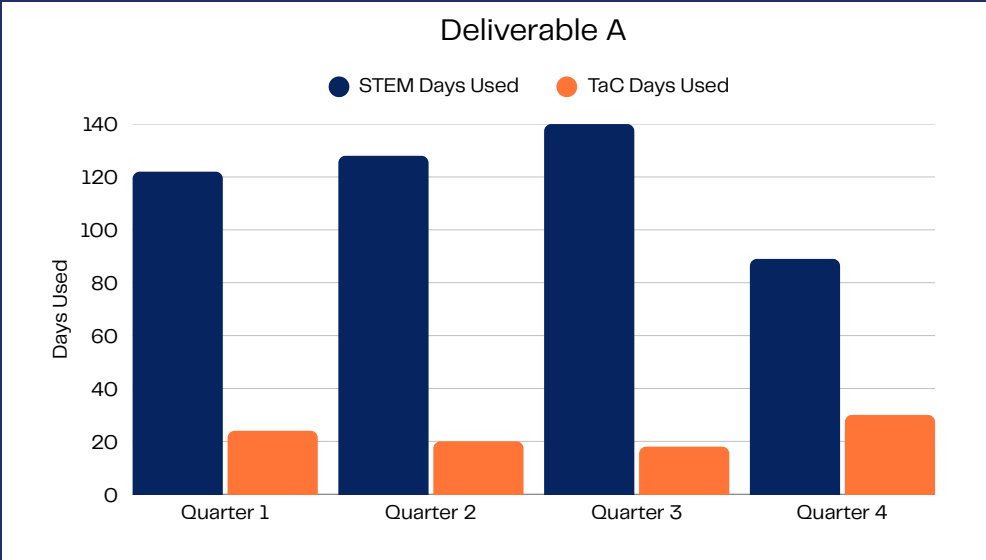




IMPACT MEASURES

Deliverable A: STEM PoC Collaboration

Identify an IU STEM point-of-contact (POC), provide collaborative technical assistance for implementing the STEM SOW, and routinely participate in STEM PoC Network Meetings for the 2024-25 school year by attending in-person, virtual, or asynchronous meetings and/or design and create resources to support the STEM PoC Network.



Total Days:
490.6

*Time allotment IU based on local needs

** The PoC and TaC Days represent the Point of Contact and Technical Assistance Days used per quarter by deliverable.



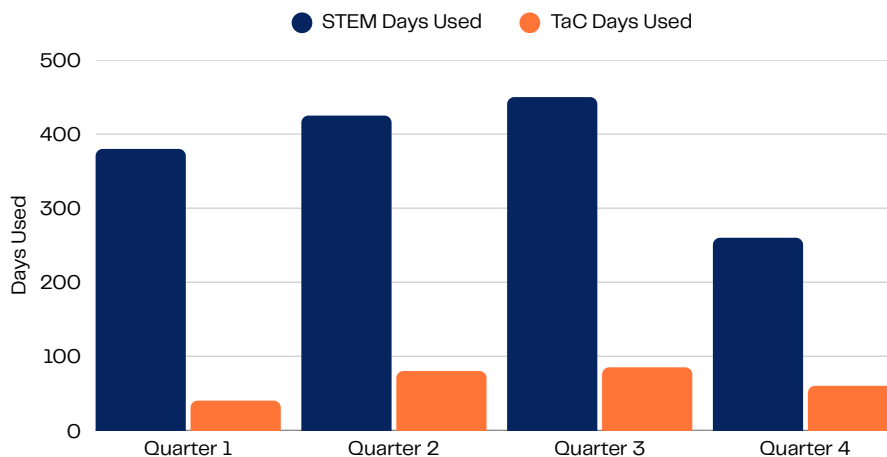
IMPACT MEASURES

Deliverable B: Integrated STEELS Standards

Support the implementation of the Pennsylvania Integrated Standards for Science, Technology & Engineering, and Environmental Literacy and Sustainability (PA STEELS Standards) by providing technical assistance to Pennsylvania LEAs and building curriculum, instruction, and assessment leadership capacity within your Intermediate Unit.



Deliverable B



Total Days:

1527.5

*Time allotment IU based on local needs

** The PoC and TaC Days represent the Point of Contact and Technical Assistance Days used per quarter by deliverable.



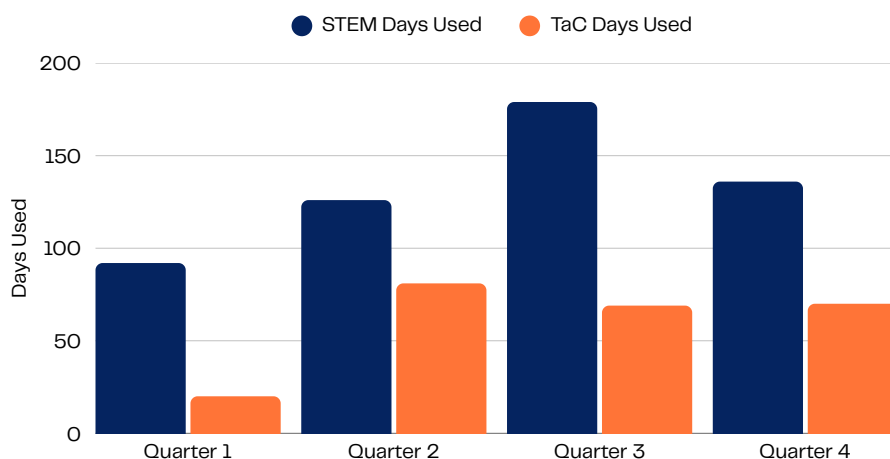
IMPACT MEASURES

Deliverable C: Computer Science Education, AI & Computational Thinking

Support the growth and implementation of K-12 Computer Science Education, Artificial Intelligence Professional Learning, and Computational Thinking as part of both STEMInPA and CSinPA initiatives.



Deliverable C



Total Days:

534.7

*Time allotment IU based on local needs

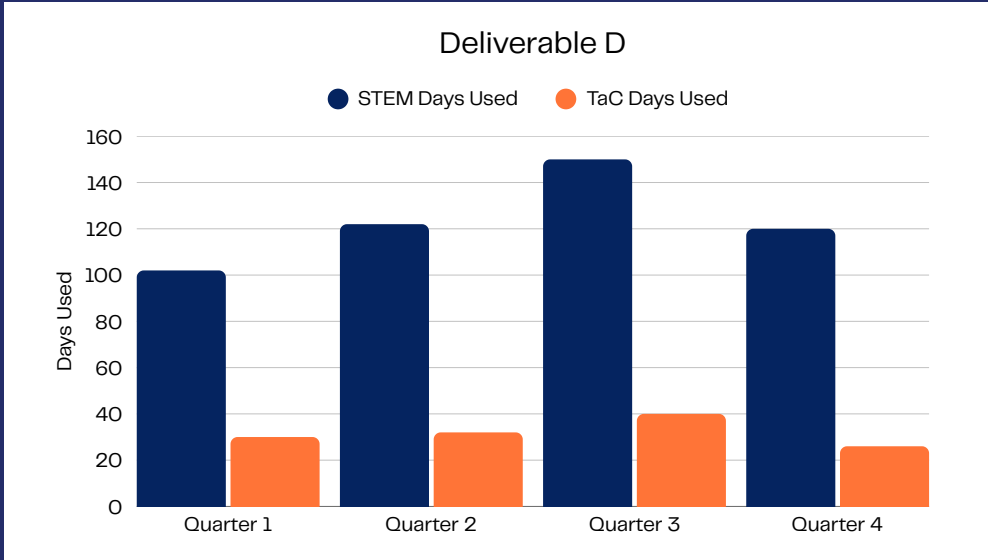
** The PoC and TaC Days represent the Point of Contact and Technical Assistance Days used per quarter by deliverable.



IMPACT MEASURES

Deliverable D: Delivery of Student-Centered Flexible Learning Models & Equitable Instructional Strategies

Provide technical support to Pennsylvania LEAs by designing and delivering, resources and professional learning experiences that promote integrative cross-curricular STEM and/or the implementation of innovative student-centered learning models, and equitable instructional strategies.



Total Days:
498.3

*Time allotment IU based on local needs

** The PoC and TaC Days represent the Point of Contact and Technical Assistance Days used per quarter by deliverable.



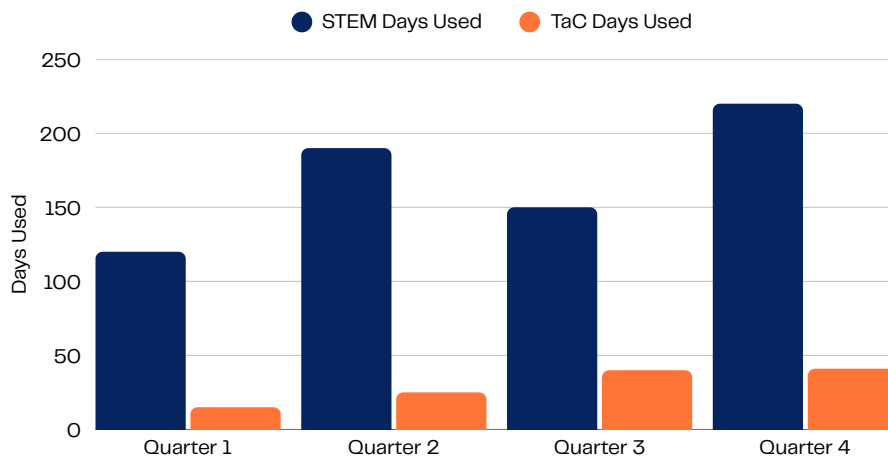
IMPACT MEASURES

Deliverable E: STEM/Computer Science Partnerships & Ecosystems

Convene diverse stakeholder groups to establish STEM/Computer Science partnerships and create meaningful programs as part of dynamic collective impact networks (STEM Ecosystems) in support of authentic real-world and relevant STEM/computer science learning and career readiness.



Deliverable E



Total Days:

825.7

*Time allotment IU based on local needs

** The PoC and TaC Days represent the Point of Contact and Technical Assistance Days used per quarter by deliverable.



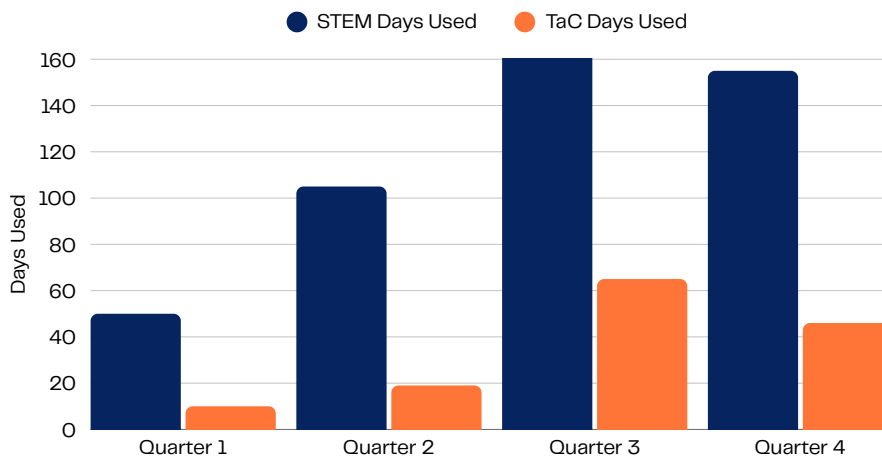
IMPACT MEASURES

Deliverable F: Student Competitions & Camps

Support the development and implementation of local, regional, and state STEM and Computer Science related competitions and innovative learning camps by providing targeted technical support to LEAs.



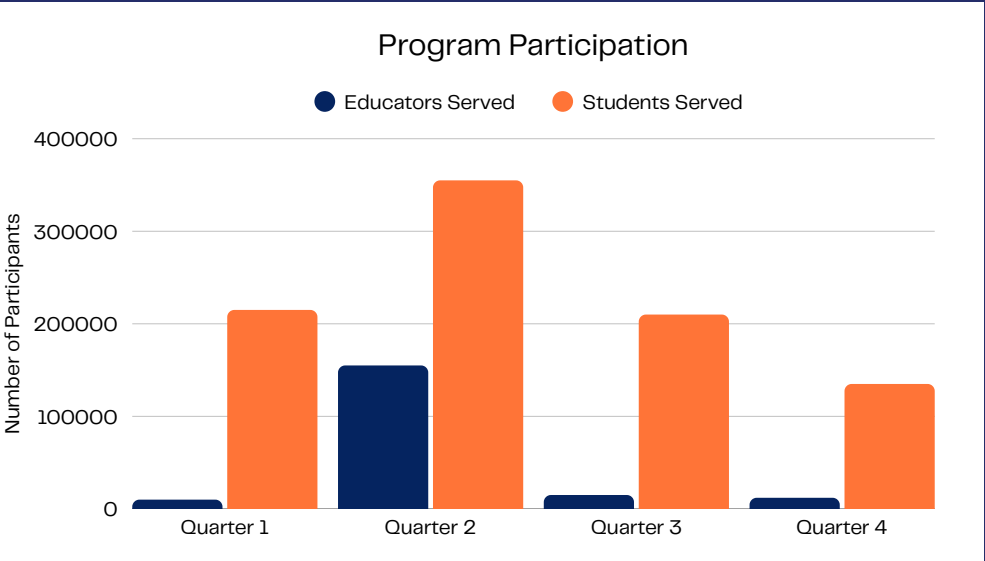
Deliverable F



Total Days:

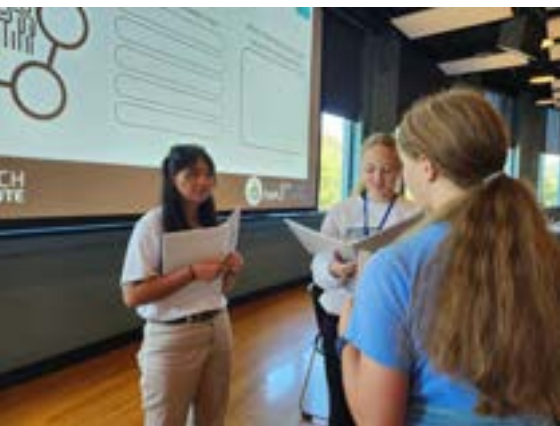
474.0

*Time allotment IU based on local needs



115
Intended days of
STEM PoCs

36
Intended Days of
IDEA B TaC



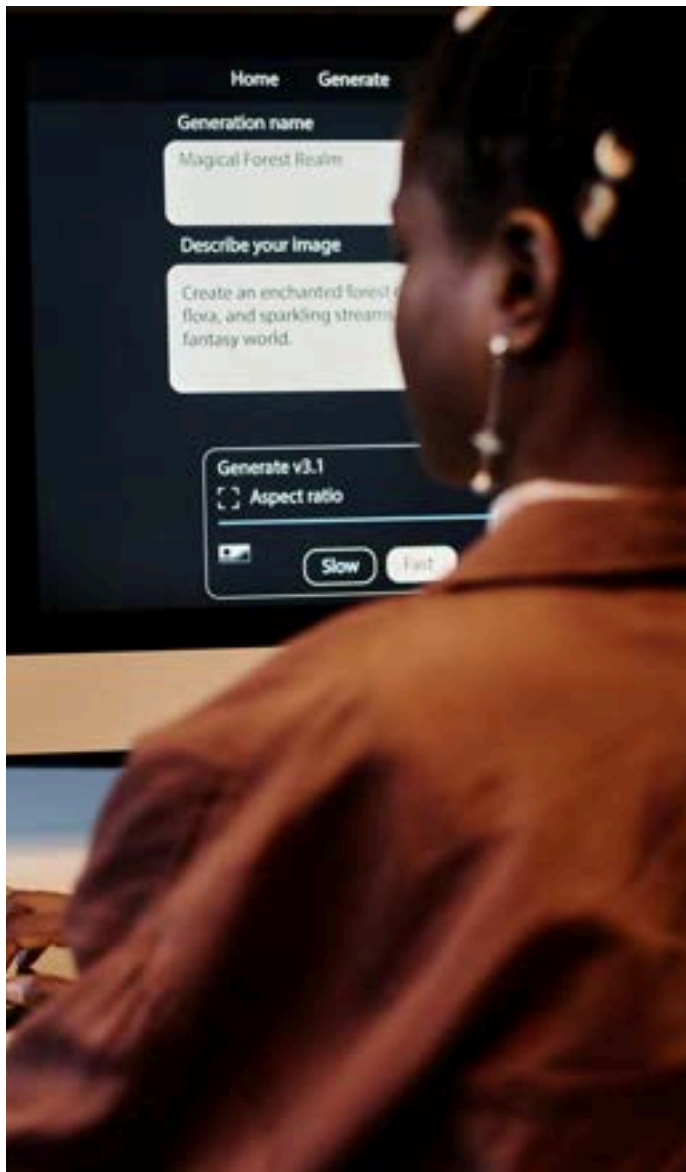
STEM in Pa

Artificial Intelligence



EST: 2024

ISTE+ASCD partnered with the Pennsylvania Department of Education's STEM & CS team to enhance educators' understanding of artificial intelligence (AI) across the state's intermediate unit network. The initiative included a professional learning series focused on integrating AI to improve teaching, learning, and operations, as well as the opportunity to engage in hands-on experiences with AI tools at [Fluxspace](#).



Key components of the series included:

Hybrid Learning Approach: A mix of onsite and virtual sessions, starting with an initial onsite day, followed by virtual coaching, and concluding with a final onsite session.

Collaborative Opportunities: Educators worked together to create resources and learning opportunities for their peers.

68

Total participants in fall and spring professional learning sessions:

17 LEAs | 27 IUs | 1 PaTTAN

OBJECTIVES

- Strengthen the capacity of educators within the statewide intermediate unit network to effectively support their peers in understanding and responding to the evolving impact of artificial intelligence in education.
- Integrate artificial intelligence to increase teaching effectiveness, enrich student learning, and improve operations.
- Collaborate with the STEM & CS leadership teams to design, structure, and tailor the professional learning series to meet program goals.
- Build a shared understanding of generative AI, reflecting on its benefits and safe use, and exploring practical applications in education.



PRIMARY CONTACTS

Tara Nattrass
Jessica Garner



IMPACT MEASURES

Professional Learning:

79%

Completion rate for Cohort 1

31%

Completion rate for Cohort 2

Support:

10+

Hours of Virtual Coaching Bundles were provided to all participants.

Feedback:

41%

Of participants expressed a strong interest in providing this program to educators in their district.

Participants valued:

- Collaboration
- Focus on meaningful implementation in schools
- Practice resources and real classroom examples
- Expert facilitation

One of the best things about AI is personalized learning. It adapts based on how students respond, giving them exactly what they need at the right time...AI also allows me to target my lesson plans better and focus on what my students really need.

—Rachelle Dené Poth
ISTE-certified educator



STEM in Pa

BrightNow



EST: 2021

The BrightNow team, a group of musicians, wrote and performed children's songs focused on STEM and computer science (CS). In collaboration with STEM and CS educators, they developed lesson plans aligned with songs' content to support classroom learning. Both the songs, including lyrics and melodies, and the accompanying lesson plans have been published on Pennsylvania education websites.



Key components of the series included:

Hybrid Learning Approach: A mix of onsite and virtual sessions, starting with an initial onsite day, followed by virtual coaching, and concluding with a final onsite session.

Collaborative Opportunities: Educators worked together to create resources and learning opportunities for their peers.

5

LEAs

14

Teachers

255

Students

OBJECTIVES

- Establish partnerships between educators and artists to engage young learners through music and movement, while aligning activities with the STEM and Computer Science curriculum as a part of the BrightNowTwo Initiative.
- Develop tools and resources for educators and families that promote social-emotional well-being of young learners.
- Engage young learners in music and movement experiences that are thoughtfully integrated with the STEM and Computer Science curriculum.



Riverview
Intermediate
Unit 6

PRIMARY CONTACTS

Bob Welsh
Leann Cox



This program has offered an outlet and opportunity for my students to find their love for music. It has opened their eyes to a whole new world filled with music and love.

-Teacher
Nicolle Esposito

PROGRAM OUTCOMES

Engagement:

10

Mini Residency Workshop sites in schools & LEAs

6

Activity sessions for schools that include **3 visits** from a BrightNow musician

Support

On-call technical assistance

Resources:

Lesson plans and project supplies are provided to classrooms and support social-emotional learning.

BrightNow supports:

- CASEL Competencies
- PATHS
- The Zones of Regulation
- PBIS
- Responsive Classroom
- Daily Five

[BrightNow Overview Lessons/Resources](#)

Feedback:

STEM

3 key areas with lesson plans:

Science, Engineering, & Environmental Literacy

Computer Science

4 songs that describe CS core principles:

Step by Step by Step (CSinPA Theme song)
That's A Computer
Quick Check
IP Address



STEM in Pa

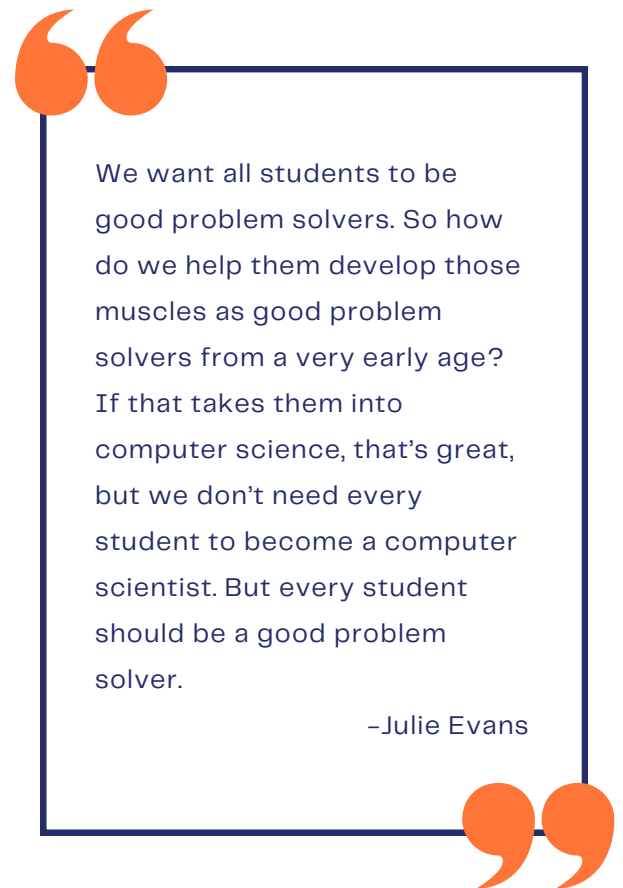
Project Tomorrow Computational Thinking



EST: 2024

Project Tomorrow, a national nonprofit supporting K–12 digital learning, uses its Speak Up Research Project to gather feedback from students, teachers, and parents. This data has informed NSF-funded work on teacher readiness in areas like coding and computational thinking (CT).

In Pennsylvania, Project Tomorrow is implementing a CT professional learning model focused on key skills such as decomposition and pattern recognition. A recent session included hands-on activities, lesson planning, and readiness assessments. Educators left motivated to bring CT into their classrooms, supported by tools and ongoing training.



41
IUs

16
LEAs

PRIMARY CONTACT

Julie Evans
CEO

Project Tomorrow



OBJECTIVES

- Ensure that all students in Pennsylvania develop computational thinking (CT) literacy as an essential workplace or future-ready skill.
- Create more opportunities for school and district leaders to understand the importance of CT literacy development as an equity imperative within Pennsylvania
- Build greater capacity for the integration of CT across schools and school districts in Pennsylvania
- Increase teacher competence, comfort, and confidence integrating CT across their everyday curriculum in K–8 classrooms
- Embrace a trainer model to scale Project Tomorrow’s professional learning model and curriculum across Pennsylvania
- Collect and report on teacher and student growth with CT skill development. This process will answer the pivotal question: “How do we know if we are being successful?”

I believe very strongly in two key things. First, every student should learn computational thinking strategies. It’s an equity imperative. I don’t care whether that’s an urban school, a suburban school, or a rural school—every student should have those strategies as part of their learning portfolio.

–Julie Evans

IMPACT METRICS



99%

Participant Feedback:
99% of Project Tomorrow in- person participants agreed that the program content was applicable to their work.



100%

Participant Feedback:
100% of Project Tomorrow online participants were very satisfied with the speakers’ knowledge



96%

Participant Feedback:
96% of Project Tomorrow in-person participants were satisfied with the overall program content

- Future Programming:**
- Following Cohort 1, a conceptual multi-year plan is in place.
 - Future professional learning will include support with:
 - Hosting IU specific CT information sessions for district leaders
 - Strategically planning with district teams for CT integration

STEM in Pa

PennSEL – WestEd



EST: JUNE 2021

The Pennsylvania Science Education Leaders (PennSEL) Network is an initiative primarily led by WestEd. Its core objective is to provide professional development and facilitate professional learning communities (PLCs) for district leaders and teacher-leaders, supporting their transition to and implementation of the:

Pennsylvania Science, Technology & Engineering,
Environmental Literacy and Sustainability (STEELS)
Standards.

STEELS Communications Toolkit Reviewers:

8 IU Leaders | **3 District Admins** | **4 Teachers** | **3 Parents** | **4 Higher Ed Staff**

STEELS Implementation Descriptors Testers:

3 School/LEA Leaders | **6 Teachers**

OBJECTIVES

- Collect comprehensive data on current status of science programming in PA.
- Develop a shared vision for high-quality science instruction.
- Understand essential features of high-quality and impactful professional development.
- Provide ongoing strategic support via coaching & partnership.



Coming together as a team across the region allows us all to lean on each other to ensure that the message that reaches classrooms is coherent.

–Joy Shaffer
PennSEL Network Leader

PRIMARY CONTACTS

Vanessa Wolbrink
Jenny Sarna



Pennsylvania STEELS Communication Toolkit now available on SAS

STEELS Assessment Toolkit

STEELS Safety Guide

PA STEELS Descriptors for Students & Teachers are organized into an Innovation Configuration (IC) Map that defines behaviors of teachers and students across essential key areas for STEELS implementation in clear, concrete terms.

Pennsylvania STEELS Classroom Implementation Descriptors for Students and Teachers
Providing a Road Map to implement the STEELS standards



**UPCOMING RESOURCES:
SY 2025 - 26**

1 Monitoring Progress of STEELS Implementation Toolkit

2 Curriculum Implementation Toolkit



“I loved the unit dissection and lesson study activity we completed over two days. I believe it was so valuable to be able to "get our hands dirty" and "do the work" so that we can have the perspective of the work and bring the process to our districts.

–Participant

STAKEHOLDER ENGAGEMENT

161

PennSEL Network members attended the Fall 2024 meeting.

132

PennSEL Network members attended the Spring 2025 meeting.

EDUCATIONAL IMPACT METRICS

Professional Learning:

20

IU Leaders, Community partners, LEA leaders, instructional coaches, and teachers attended a two-day PL meeting to increase their understanding of a process for visualizing and scoring evidence from instructional materials to successfully select high-quality instructional materials.

93%

Report gaining valuable knowledge and skills from attending the PA STEELS Review Meeting.

93%

Have a better understanding of the key activities their district or organization will need to complete to effectively select materials designed for STEELS Standards.

“The PennSEL meetings have pushed my intellect in a totally different yet awesome way. I am surrounded by people who are passionate about improving science education while learning the tools to improve it. [This approach] makes me excited to finish my final decade in teaching better than my previous 25 years.

–Participant

STEM in Pa

Philadelphia Ed Foundation Support (PEF)

EST: JULY 2023

Philadelphia
Education Fund

The Philadelphia Ed Fund (PEF) has been charged with providing STEM-related support in Philadelphia, pertinent to the PAsmart Program. PEF oversees and supports two Philadelphia-based Chief Science Officers (CSOs) Programs, as well as others. There are six prongs of support provided by PEF.

OBJECTIVES

- Support the Philadelphia STEM Ecosystem and its initiatives.
- Support the expansion of the Chief Science Officers (CSO) Program..
- Create and run STEM workforce development programs.
- Support in-school & OST educator development in STEELS standards.

PARTICIPANTS AND REACH

950+

Ecosystem members

580+

PSEC members

900+

PSSE members

9000+

listserv individuals

PRIMARY CONTACTS

Betsy Payne
David Garbe





Ignite STEM Philly

98

students participated in hands-on STEM experiences and were exposed to a wide range of STEM career paths, as well as professional and financial preparation for life beyond high school.



Chief Science Officers (CSO) Program

2

Mastery Charter School students completed the program, explored diverse STEM activities and careers, as well as presented a final Capstone Project highlighting their growth.



PECO STEM Teaching Fellows Program

56

Educators participated in professional learning to deepen their understanding of the new PA STEELS standards.



STEM Ecosystem

950+

members from businesses, school districts, funders, teachers, community organizations, museums, and individuals.



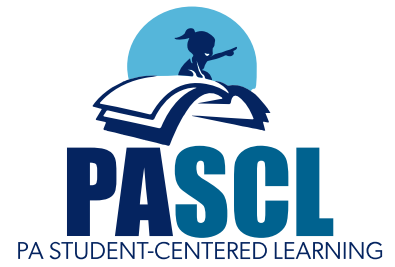
Philadelphia STEM Equity Collective (PSEC)

600+

students participated in the program aimed at advancing equitable access to STEM career pathways for historically marginalized groups in STEM fields.

STEM in Pa

Student Centered Learning (SCL)



EST: 2023



The Pennsylvania Student-Centered Learning Community of Practice (PASCL CoP) is a statewide effort to transform K-12 education by placing students at the heart of the learning process. Developed through collaboration among the Pennsylvania Department of Education and the Pennsylvania Association of Intermediate Units, the community seeks to improve educational outcomes by fostering personalized, equitable, and engaging learning environments.

The CoP is guided by a strategic blueprint that outlines five key system components essential for implementing student-centered learning: Administration & Leadership, Learning Models, Curriculum Design & Development, Teaching & Learning, and Community Outreach.

97%

Of the Intermediate Units across the state of PA are registered participants of the PA Student Centered Learning Network.



OBJECTIVES

- Redesign educational environments to prioritize student agency, voice, and ownership in the learning process.
- Guide schools and districts in transforming five core areas: Administration & Leadership, Learning Models, Curriculum Design & Development, Teaching & Learning, and Community Outreach.
- Ensure that learning experiences are tailored to individual student needs, interests, and aspirations, fostering equity and engagement.
- Strengthen partnerships among educators, districts, and communities to share resources, best practices, and success stories that advance student-centered learning.



PennState

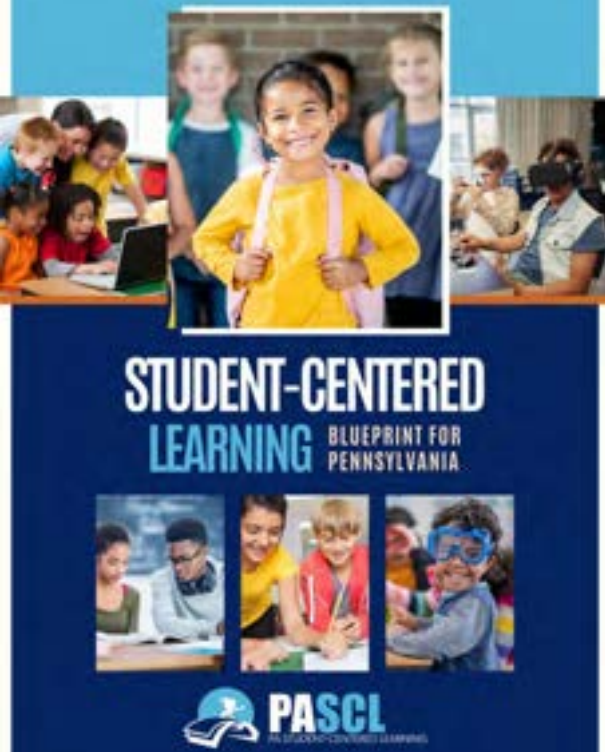
Dr. Peggy Schooling &
Rebecca Heiser

**SOCOL
MORAN**

PRIMARY CONTACTS

Ken Zimmerman
Tim Leister
Becky Henderson
Kendy Schiffert

Tracy Rains
Eric Lech
Brian Stamford
Brandon Langer



500+

Copies of the Student Centered Learning Blueprint distributed to key stakeholders via email, network events, and conferences.

26

New teacher-based classroom and professional learning resources were added to the [SCL Blueprint](#) to support teachers in the implementation of the tool.

NEWLY RELEASED!



[The Blueprint for Student-Centered Learning Transforms Education Podcast](#)

332

Subscribers

were obtained for the Student Centered Learning digital distribution list with a **48%** email open rate and a **5%** click rate.

11

IUs

Attended PASCL Blueprint Presentation and “Train the Trainer” events.

4

Site Visits

3 Districts & 1 IU
Held a PASCL site visit to illustrate SCL innovation across the state.

“

Pennsylvania’s journey toward student-centered learning has been marked by collaboration, innovation, and a steadfast commitment to reimagining education. As the state continues to expand its SCL initiatives, the potential impact on students and educators is profound. SCL offers a way to engage students in their own learning journey, ensuring they have the tools to succeed not only in school but in life.





SPARKING A LOVE OF LIFELONG LEARNING

“There is a sense of statewide cohesiveness that wasn’t there before.
Now, this isn’t just an IU 13 thing; this is a Pennsylvania thing.”

-Ken Zimmerman

In education, collective efforts lead to real world success. That’s evident when looking at the Student-Centered Learning initiative supported by Ken Zimmerman, associate program director of educational technology & innovation at Intermediate Unit 13. Perhaps there is no better example than a teacher to show why learning is a lifelong endeavor. However, providing compelling and applicable professional development opportunities for educators is a big job, and one that requires a lot of support and collaboration.

The analogy Zimmerman used to describe the open-ended and customizable options available for educators looking to expand their understanding of student-centered learning approaches was “choose your own adventure.”

When asked to recall a meaningful moment, Zimmerman eagerly shared the story of a teacher who was nearing retirement age. “She came into this experience thinking there was nothing left for her to learn. She told me that with her years of experience, there was no way she didn’t already understand how to connect with students.

Then, by the end of the experience, she was so amazed at how much her perspective had shifted that she actually made the decision to delay her retirement. That’s how excited she was about this new student-centered approach.”

Student-centered learning gained some much-needed reach once the Pennsylvania Department of Education became involved. Zimmerman explained, “There is a sense of statewide cohesiveness that wasn’t there before. Now, this isn’t just an IU 13 thing; this is a Pennsylvania thing.”

This vote of confidence from the state has allowed wider access to innovative, inspiring, and customizable education opportunities for teachers, ensuring that both the students and staff in Pennsylvania classrooms stay engaged, motivated, and successful.

When the state takes an interest in funding creative educational initiatives like PAsmart, teachers succeed, students thrive, and Pennsylvania continues to excel.

STEM in Pa

Environmental Literacy & Sustainability (ELit Hubs)



EST: 2022



The ELit Hubs initiative is a statewide effort to expand and strengthen Pennsylvania's Environmental Literacy Network through six regional hubs. Supported by a NOAA B-WET grant, the hubs serve as collaborative centers for advancing environmental literacy and sustainability education aligned with Pennsylvania's STEELS Academic Standards.



OBJECTIVES

- Establish clear roles for the Regional Hub leaders and build the capacity of all six hubs to effectively support statewide implementation of Meaningful Watershed Educational Experiences (MWEE) and Environmental Literacy & Standards (EL & S) initiatives statewide
- Deliver professional development and curriculum support to educators to integrate MWEE into Pennsylvania's K-12 STEELS Academic Standards
- Engage diverse cross-sector partners, promote equitable access to hub activities, and integrate Diversity, Equity, Inclusion, Justice, and Accessibility (DEIJA) principles across regional and statewide initiatives.
- Support schools and districts in developing Environmental Literacy (ELit) Plans, integrating MWEE-based curricula, and achieving or sustaining Green Ribbon School recognition.
- Facilitate regional events, share successes and challenges, and actively support statewide convenings, resource development, and strategic communication initiatives.

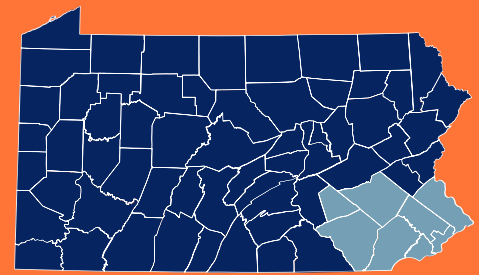
The following pages detail the Commonwealth's six regional ELit Hubs.

PRIMARY CONTACTS FOR ALL REGIONS

Tamara Pepper
Michelle Niedermeier
Steve Kerlin

STEM in Pa

Environmental Literacy & Sustainability
(ELit Hubs) – **Southeast Region**



EST: 2022



PARTICIPANTS AND OUTREACH 2025

114+

PROGRAM
PARTICIPANTS

IMPACT METRICS

~30

Attendees at the PAEE/PASEED/Elit Hub partnership meeting at Longwood Gardens, which provided the opportunity for partnerships and the advancement of environmental literacy efforts.

8

Educators received mini-grants of \$200/each to fund student environmental literacy projects.

~50

Formal and non-formal educators attended the Teaching Green Symposium, which provided the opportunity to connect with and learn about the Environmental Literacy and Sustainability (EL&S) domain of the STEELS standards.

100+

Hours spent on Environmental Literacy & Sustainability Initiatives.

CONTACTS

Tamara Pepper
Michelle Niedermeier
Steve Kerlin

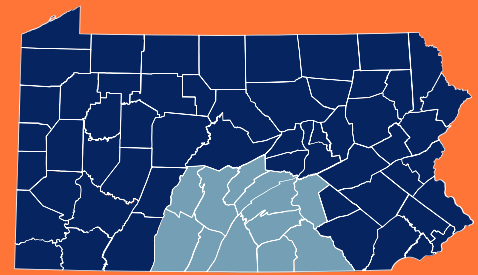
SOUTHEAST REGIONAL CONTACTS

Ellen Schultz
Diana Potts



STEM in Pa

Environmental Literacy & Sustainability
(ELit Hubs) – **Southcentral Region**



EST: 2022



PARTICIPANTS AND OUTREACH 2025

450+ PROGRAM PARTICIPANTS

IMPACT METRICS

250

5th, 7th & 8th grade students participated in field experiences hosted by Community partners. The focus of the experiences included local water systems, sustainable farming, native and invasive species, and human impact on the environment.

90

8th grade students created presentations that compared their local waterways to the Susquehanna River following their field experiences with local environmental education partners. Their projects were shared with local community members, the school board, and district administration.

175+

Hours spent on Environmental Literacy & Sustainability Initiatives.

48

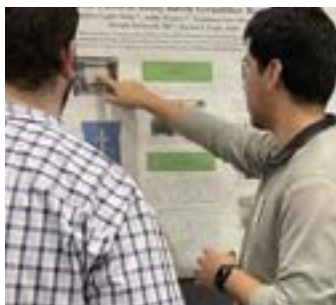
Formal and non-formal educators attended the [Meaningful Watershed Educational Experience](#) (MWEE).

32

Educators completed the MWEE Ambassador training, MWEE 101 or became PA MWEE Certified Educators.

3rd & 5th

Grade teachers joined Shared Waters training to teach authentically about their local watershed. Program funds replenished classroom kits.



CONTACTS

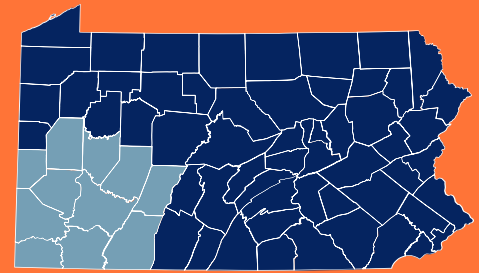
Tamara Pepper
Michelle Niedermeier
Steve Kerlin

SOUTHCENTRAL REGIONAL CONTACTS

Jennifer Peglow
Carrie Lankford

STEM in Pa

Environmental Literacy & Sustainability (ELit Hubs) – Southwest Region



EST: 2022



PARTICIPANTS AND OUTREACH 2025

- Students
- Formal educators from local IUs
- Non-formal educators from local conservation districts and programs
- ELit Hub leads

IMPACT METRICS

40+

Formal and non-formal educators attended the MWEE Ambassador Training at Raccoon Creek State Park.

100+

Attendees at the Western PA Environmental Education Summit: Learning Without Walls hosted at Waynesburg University, which provided the opportunity to uplift the work and showcase model programs for educators.

118+

Hours spent on Environmental Literacy & Sustainability Initiatives.

48

Formal and non-formal educators attended the Meaningful Watershed Educational Experience (MWEE).

32

Educators completed the MWEE Ambassador training, MWEE 101 or became PA MWEE Certified Educators.

3rd & 5th

Grade teachers joined Shared Waters training to teach authentically about their local watershed. Program funds replenished classroom kits.



CONTACTS

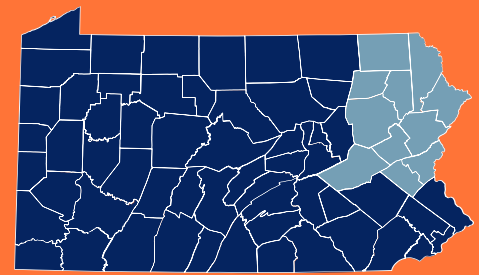
Tamara Pepper
Michelle Niedermeier
Steve Kerlin

SOUTHWEST REGIONAL CONTACTS

Alyssa Moore
Kevin Willis

STEM in Pa

Environmental Literacy & Sustainability
(ELit Hubs) – **Northeast Region**



EST: 2022



PARTICIPANTS AND OUTREACH 2025

139 PROGRAM
PARTICIPANTS

IMPACT METRICS

16

Attendees at the
Pennsylvania
Association for
Environmental
Educators (PAEE)
Conference.

131

Participants, which
included 92 students, 20
pre-service teacher
judges, 14 teacher
advisors and 5 IU staff,
engaged in a regional
K'NEX STEM Challenge.

45

Days spent on Environmental Literacy &
Sustainability Initiatives.

Regional teams
participated in the
statewide competition at
the PA Farmshow
Complex.



Regional team
presentation at the
PAEE Conference
titled "Unlocking the
Scalable Power of the
Trunk".



[Click to View](#)

CONTACTS

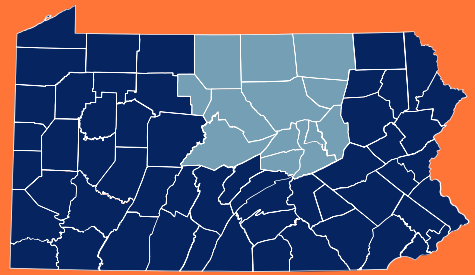
Tamara Pepper
Michelle Niedermeier
Steve Kerlin

NORTHEAST REGIONAL CONTACTS

Alexandra Konsur-Grushinski
Stephanie Williams

STEM in Pa

Environmental Literacy & Sustainability
(ELit Hubs) – **Northcentral Region**



EST: 2022



PARTICIPANTS AND OUTREACH 2025

200+

TEACHERS, INFORMAL EDUCATORS AND
LOCAL STEM PROVIDERS PARTICIPATED
IN THE EL& S INITIATIVES

IMPACT METRICS

28

Teachers attended two
Meaningful Watershed
Educational Experience
(MWEE) trainings and a
Watershed Training at
SU Freshwater
Institute.

80

Teachers and informal
educators received
regular communication &
involvement in the EL & S
Initiatives via semi-annual
newsletters.

500+

Hours spent on Environmental Literacy &
Sustainability Initiatives.

28

Teachers attended a
Professional Learning
Community at Montour
Preserve.

190+

Hours were spent
elevating, highlighting, and
supporting EL&S
Initiatives through STEM
Ecosystem interaction and
podcast contributions.

CONTACTS

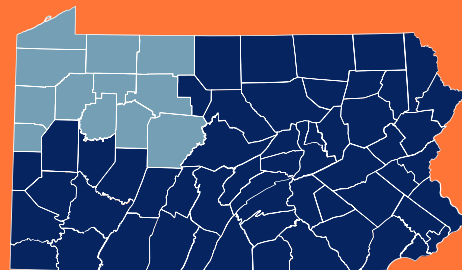
Tamara Pepper
Michelle Niedermeier
Steve Kerlin

NORTHCENTRAL REGIONAL CONTACTS

Colleen Epler-Ruths

STEM in Pa

Environmental Literacy & Sustainability
(ELit Hubs) – **Northwest Region**



EST: 2022



PARTICIPANTS AND OUTREACH 2025

200+

STUDENTS, FORMAL EDUCATORS, NON-FORMAL EDUCATORS & PARTNERS

IMPACT METRICS

10

Conservation districts received support with the Envirothon Project from the NWP A ELit Hub.

127

Students participated in the STEM Design Competitions.

29

Formal and Informal educators attended the NWP A Meaningful Watershed Educational Experience (MWEE) Fall and Spring Ambassador Trainings.



Monthly Newsletter production has enhanced communication and engagement within the EL&S community. By providing timely updates, highlighting events, and sharing resources, the newsletters have strengthened connections among stakeholders, increased participation, and fostered a greater sense of involvement and collaboration.



135+

Hours spent on Environmental Literacy & Sustainability Initiatives.

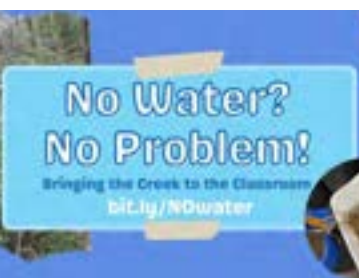
22

Formal educators, informal educators, and partners attended the Pennsylvania Association for Environmental Educators (PAEE) Conference.



ELIT HUB LEAD

Delivered a conference presentation titled, "No Water? No Problem!", which highlighted how to integrate watershed investigations with the PA STEELS Standards.



CONTACTS

Tamara Pepper
Michelle Niedermeier
Steve Kerlin

NORTHWEST REGIONAL CONTACTS

Rebecca Schaufele

STEM in Pa

PARSE – 3D Teaching & Learning PSU

EST: 2021



Pennsylvania Ambitious & Responsive Science Education (PARSE) is a collection of IU-based PLCs, facilitated by faculty at Penn State University. There are four PLCs in the program focused on four different themes (e.g. assessment, needs of special learners in STEM, etc.). The PLCs meet regularly and collaborate on a capstone project that often involves disseminating findings at their constituent LEAs.

20 Educators engaged in professional learning opportunities

OBJECTIVES

- Support STEM PoCs at IUs via a community of adult learners.
- Help district administrators learn about STEELS & aligned teaching.
- Promote teaching that is responsive to student cultures and ideas.
- Identify scaffolding and support for teachers of students with diverse learning needs.

2,450

Students will be impacted by teacher's enhanced ability to align science teaching with the Science, Technology & Engineering, Environmental Literacy and Sustainability (STEELS) Standards.

88

Professional learning community (PLC) hours received by educators.



PennState

PRIMARY CONTACT

Scott McDonald

STEM in Pa

Pennsylvania Statewide STEM Ecosystem (PSSE)



EST: JULY 2017

PSSE is a statewide, cross-sector network representing Pennsylvania's diverse regions and perspectives striving to be all things STEM in PA. PSSE engages Pennsylvanians from a range of sectors including those from the workforce, education, non-profits, community organizations, families, and others, in our efforts to work collaboratively to strengthen and accelerate STEM learning outcomes. PSSE has been influential in informing bipartisan legislation, spotlighting innovative practices, connecting youth to STEM secondary, post-secondary and career opportunities, as well as providing professional development for STEM educators.

PARTICIPANTS & OUTREACH

A collaboration between STEM Ecosystems and Pennsylvania Department of Education.

14

Regional STEM Ecosystems represented.

154

Total leadership team meeting attendees.

208

Hours of leadership team collaboration on project growth strategies, engagement, data collection, and support.

MISSION

Through purposeful cooperation and collaboration, PSSE facilitates cross-sector convenings, amplifies STEM education resources, drafts policy recommendations and stewards a community of practice centered on equity, inclusion, and belonging in quality STEM education and workforce development.

VISION

All Pennsylvanians will have access to quality STEM education and career pathways to become tomorrow's leaders, influencers, and problem-solvers.

VALUES

PSSE is centered around a set of core values that guide the efforts and shape our commitment to fostering equitable access to opportunities in STEM. The work of our organization and its members reflect these values and our unwavering commitment to creating a brighter future for all Pennsylvanians.

PRIMARY CONTACTS



Summer 2025 PSSE website launched:

pastemecosystem.org

Alexandra Konsur-Grushinski
Stephanie Schwab



LEADERSHIP DEVELOPMENT

Developed a series of synchronous online leadership development learning sessions and associated resources to support a STEM Ecosystem leadership talent pipeline.

51

Regional Ecosystem leaders attended Leadership Retreat.

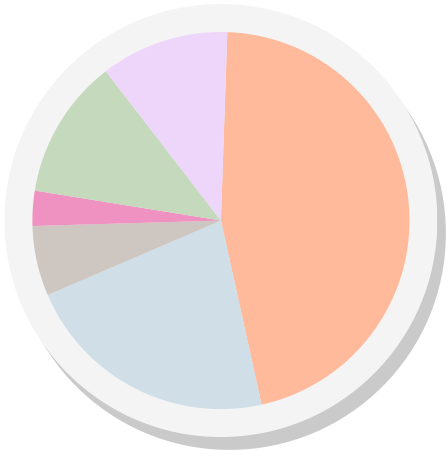
91

participants attended the Leadership Summit & Statewide Convening.

Directory Membership

1018

Public Members



Institution Type	Number of Members	%
Public Schools	390	38%
Charter Schools	55	5%
Private Schools	22	2%
Total K-12 Schools	467	46%
Other Education (Higher Ed, IUs, OST)	224	22%
Business/Industry	61	6%
Government agencies	31	3%
Community Organizations (Tech Center, Library, NGO, Museum, Science Center)	122	12%
Other	112	11%

MEMBERSHIP ACCESS

- Events, webinars, or conferences
- Grants or other funding opportunities
- Pennsylvania STEM news and policy updates
- STEM industry professional development
- Convenient communication with other members



It is more than just a membership. It's a group of passionate individuals and organizations who believe in the power of STEM advocacy.

-Member

