



Expanding Computer Science and STEM Education Grants

Request for Application

November 2019



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Introduction

As the commonwealth's economy continues to grow, Pennsylvania faces significant economic opportunities in the next decade. Pennsylvania's economy is among the twenty largest in the world and it ranks sixth among states in job volume. As Pennsylvania's demographics change, the commonwealth is expected to experience a long-term shortage of workers in its labor force. Given this, Pennsylvania's future depends on the development of a strong workforce and business community able to compete in the global economy.

To support Pennsylvania's future economic and business growth, and to remain competitive, Pennsylvania must grow its supply of skilled workers. Over the next decade, most good paying jobs in Pennsylvania, and across the country, will require some form of education or training after high school, especially in fast-growing fields of Computer Science (CS) and Science, Technology, Engineering, and Mathematics (STEM). These career pathways look different for different people and sectors, and a one-size-fits-all approach to education and training will not work for all students, workers, and businesses.

By 2025, more than 60 percent of good jobs in the commonwealth will require some postsecondary education, a demand that shaped the statewide attainment goal established by Governor Tom Wolf in 2015.¹ Currently, only 45 percent of Pennsylvanians hold these credentials, and a significant skills gap, especially for "middle skill" occupations requiring some postsecondary education but not a bachelor's degree, continues to persist for the commonwealth's current and emerging workforce.²

Over the past three years, Pennsylvania has established a strong and innovative culture for CS and STEM learning by strengthening STEM experiences for all students, supporting professional development for educators, and forming STEM ecosystems across the commonwealth. Pennsylvania is also expanding registered pre-apprenticeships and apprenticeships to pair classroom instruction with skills training for careers with family-sustaining wages. Finally, Pennsylvania has also embraced the Next Generation Industry Partnership model to align education, workforce, and economic development to collaboratively support the overall competitiveness of an industry.

¹ This goal was also endorsed by the Pennsylvania State Board of Education in November 2016.

² [Interactive Data Dashboard: Postsecondary Enrollment, Completion, and Educational Attainment in Pennsylvania](https://public.tableau.com/profile/padeptofed#!/vizhome/College-GoingRatesandEducationalAttainment_0/Main) at https://public.tableau.com/profile/padeptofed#!/vizhome/College-GoingRatesandEducationalAttainment_0/Main

Governor's Middle Class Task Force

To ensure that Pennsylvania remains competitive in a rapidly changing economy, and to hear directly from students, workers, employers, and communities across the commonwealth, Governor Wolf established the non-partisan Governor's Middle Class Task Force in fall 2017. Co-chaired by business, labor, postsecondary education, and workforce development leaders, the Task Force held six regional roundtables to hear directly from Pennsylvanians on barriers they face getting and keeping good jobs, and on the need for businesses to increase their competitiveness.³

In response to these perspectives, the Task Force identified six critical areas to inform future policy considerations:

1. A skilled and quality workforce can sustain and grow a competitive economy in Pennsylvania.
2. Business hiring practices are impacted by multiple conditions, including liability concerns, global competition, and unknown long-term workforce needs.
3. Education, workforce, and economic development systems are not coordinating their efforts.
4. Many workers and students believe upskilling is risky and costly, and continuing education beyond high school outweighs economic benefit.
5. The "traditional" service delivery model in postsecondary education is not accessible or affordable for first generation, under-represented, and non-traditional students and workers.
6. Best practices and models in education and workforce exist, but are not widely shared, expanded, or invested in.

To ensure that these issues would be addressed in depth, Governor Wolf established in spring of 2019 the [Keystone Economic Development & Workforce Command Center](#). This group of state leaders from across the public and private sectors centralizes and elevates all workforce development efforts, finding new ways to share information, coordinate statewide efforts, minimize or eliminate barriers to workforce preparation and success, and prepare the state's businesses, workers, and youth for the workforce of the future.

³ <https://www.governor.pa.gov/newsroom/governor-wolfs-middle-class-task-force-kicks-off-first-regional-roundtable/>

PAsmart Framework

What is PAsmart?

In response to the Governor's Middle Class Task Force findings, Governor Wolf proposed the PAsmart initiative, a strategic approach to education and workforce development. The PAsmart initiative is designed to address the feedback Pennsylvanians shared with the Middle Class Task Force, to better align education, workforce, and economic development initiatives and funding.

In its second year of funding, the PAsmart initiative continues to make public programs and initiatives more accessible and easier to navigate so Pennsylvanians can develop the skills and abilities they need to obtain quality jobs, and businesses can recruit and retain skilled workers.

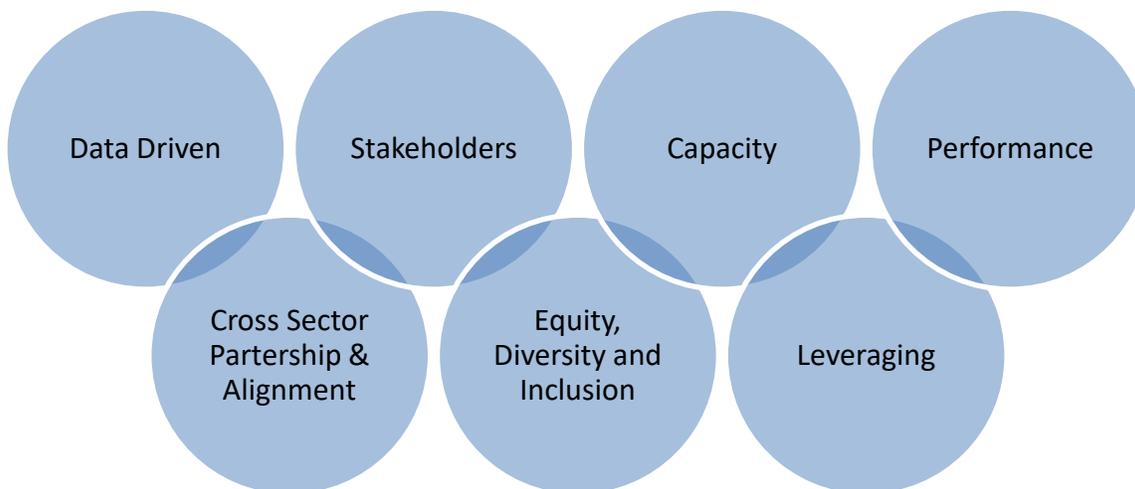
PAsmart is based on four goals:

1. Strategically investing resources in initiatives to support economic growth, and education and training opportunities;
2. Achieving successful outcomes for Pennsylvania students, workers, businesses, and communities;
3. Improving coordination and alignment of education and workforce development programs, services, and funding; and
4. Transforming inter-agency, cross-sector collaboration around education, workforce, and economic development at state, regional, and local levels.

As part of the PAsmart initiative, the FY2019-20 Enacted Budget included \$40 million for strategic, competitive, and cross-sector investments focused on meeting the education and workforce development needs of students, workers, employers, and communities across Pennsylvania, including those disconnected from education and workforce opportunities (e.g. opportunity youth and young adults, long-term unemployed, etc.). PAsmart grants funded by this investment will support cross-sector partnerships to address unique local, regional, and statewide education, workforce, and economic needs. Funding will support a variety of projects, but should be data-driven, align with and leverage existing initiatives and resources, and have a measurable impact.

PAsmart Framework Principles and Funding Priorities

PAsmart is designed to provide flexible resources to support innovation, and cross-sector alignment and collaboration, to increase equity, remove barriers to access, and build on existing initiatives and fill gaps, to better serve Pennsylvania students, workers, businesses, and communities. PAsmart grants support the following PAsmart Principles and Funding Priorities:



- **Data-driven Innovation:** Proposals identify a clear problem, challenge, or opportunity supported by relevant data and information, and include an innovative strategy to increase opportunity for Pennsylvania students, workers, employers, and communities.
- **Cross-sector Partnership:** Proposals demonstrate an effort to develop strong, high-quality cross-sector partnerships committed to working collaboratively to implement the proposal. Applicants are encouraged to have multiple partners across sectors (e.g. education partner, workforce development, business, economic development, and community partners) that demonstrate their commitment through letters of support.
- **Cross-sector Alignment:** Proposals align with existing local, regional, and state education, workforce, and economic development initiatives.
- **Stakeholder Engagement:** Proposals engage partners, customers, and stakeholders, including the target population, in the development of the proposal and its implementation.
- **Equity, Diversity, and Inclusion:** Proposals demonstrate a commitment to serve and increase access for historically under-represented and under-served students, workers, businesses, and communities. Applicants are encouraged to identify and address barriers to education and employment.

- **Capacity Building:** Proposals build the applicant's or partners' organizational capacity to better implement the proposal and support students, workers, businesses, and communities.
- **Leveraging Existing Resources:** Proposals demonstrate PAsmart resources will leverage and supplement, not supplant, existing public and private resources (e.g. other federal or state grants and philanthropic contributions, cash, in-kind, etc.). Proposals demonstrate efficient and effective use of resources.
- **Performance Outcomes:** Proposals include measurable performance outcomes and a strategy to collect, analyze, and report performance data.

[More information on the PAsmart Framework: Principles and Funding Priorities.](#)

Expanding Computer Science and STEM Education

The Pennsylvania Department of Education (PDE) is requesting applications for the 2019-20 Governor's PAsmart *Expanding Computer Science and STEM Education Initiative*. Up to \$20 million in competitive funding is available to support programs with increasing access and improving equity of access to computer science (CS) and STEM education locally and statewide to students of all ages.

Two competitive grant programs are available to eligible applicants, each with a different audience and purpose:

1. **Targeted PreK-12 Computer Science and STEM Education Grants** –Targeted Grants are structured to meet the needs of local education agencies (LEAs) and their schools that have few or no CS offerings and did not receive Targeted Grant funding in 2018-2019. The purpose of these grants is to build educator capacity and expand student access, opportunity, and inclusion in computer science from pre-kindergarten through grade 12. These grants have a low-risk entry point for applicants and aim to help schools build the infrastructure to establish strong CS/STEM pathways.
2. **Advancing Computer Science and STEM Education Grants** – Advancing Grants are high-level comprehensive grants meant to support collective impact approaches to expanding STEM and computer science. The purpose of these grants is to:
 - Give regions a chance to leverage or expand CS/STEM ecosystems;
 - Grow partnerships between LEAs, postsecondary institutions, businesses, libraries, afterschool organizations, and other CS/STEM-focused organizations;
 - Improve access to CS/STEM experiences for learners of all ages, including historically underserved populations and adult learners; and
 - Expand the pool of highly qualified CS/STEM educators at all levels of Pennsylvania's education system.

Completed applications must be submitted by to by the following deadlines:

- **Targeted PreK-12 Computer Science/STEM Education Grants** are due no later than 11:59PM on Friday, December 20, 2019.
- **Advancing Computer Science/STEM Education Grants** are due no later than 11:59PM on Friday, January 10, 2020.

Successful applicants will be selected based on the evaluation process described herein. This document describes the requirements applicants will be expected to meet and the criteria that will be used to determine status as a successful applicant. More information at:

education.pa.gov/PAsmart.

Background

PASmart provides opportunities to remove barriers in education and the workforce. Nearly 300,000 jobs in the commonwealth require skills in science, technology, engineering, and mathematics (STEM). Over the next decade, more than 70 percent of new jobs will require these skills. For example, jobs in engineering are expected to expand by 9 percent annually through 2028. Postsecondary degree attainment in engineering is increasing steadily, but not equitably. In 2018, only 24 percent of engineering degrees earned in PA were earned by women, and only 9 percent by students of color.

In surveying current STEM offerings in Pennsylvania K-12 schools, computer science⁴ has stood out as an area of study with disparities in its availability to students. Currently, offerings for computer science (CS) courses and programs of any kind are scarce in the commonwealth.⁵ Of the more than 3,000 K-12 public schools in Pennsylvania, only 324 (23 percent) offered CS courses of any kind in 2016-2017. Hence, of over 1.7 million students, only 20,435 (2.1 percent) participated in a CS course or program. When looking at a map of LEAs reporting students in CS courses, large swaths of the state do not have any offerings at all.

Within LEAs, some schools currently offer CS opportunities and others do not. Even where CS is offered, access to high-quality computer science and STEM education varies significantly. Students of color, low-income students, and girls access these opportunities at lower rates than their wealthier, white, and male peers⁶. Of the 2.6 percent of Pennsylvania's students who took computer science and related courses in 2018, patterns of access by historically underserved student groups are even more alarming:

- Fewer than 45 percent of students who took computer science were low-income.
- Only 1.5 percent of students were English Learners.
- Boys are more than twice as likely to take CS courses than girls in Pennsylvania, and more than three times as likely to take AP computer science.
- Of the 346 public middle and high schools offering CS courses during the 2017-2018 school year, 28 schools (12.3 percent) did not have any girls enrolled in those courses.

⁴ For the purpose of this grant, computer science is defined as “the study of computers and algorithmic processes, including their principles, their hardware and software designs, their applications, and their impact on society.” A. Tucker, et al., *A Model Curriculum for K-12 CS: Report of the ACM K-12 Task Force Curriculum Committee (2nd. Ed.)*, Association for Computing Machinery, 2006.

⁵ All data from this section comes from [this internally created data Tableau](#), developed by the Pennsylvania Department of Education, unless otherwise stated.

⁶ Google Inc. & Gallup Inc. (2016). Diversity Gaps in Computer Science: Exploring the Underrepresentation of Girls, Blacks and Hispanics. Retrieved from <http://goo.gl/PG34aH>. Additional reports from Google's Computer Science Education Research are available at g.co/cseduceresearch

- While students of color represent a growing share of the student population in Pennsylvania, in 2017-2018, white students represented most CS enrollments statewide (74.2 percent or 15,289 students). Black and African American students only made up 8 percent of all students taking CS, while Hispanic students made up only 7 percent of students enrolled in CS courses statewide.

The Governor’s PAsmart Initiative seeks to provide better access to CS and STEM courses in part by investing in educators’ ability to provide CS courses. In the first year of PAsmart, nearly 500 teachers from 249 school districts that received PAsmart Targeted Grants responded to a survey about their computer science experience prior to receiving training. Nearly half of participants responded that they had never taught CS; more than two-thirds had led an “Hour of Code” but had never provided any other CS experience to their students. Three-quarters of the participating educators reported that they were not familiar with pedagogical strategies that support computer science, and only about one-quarter of them felt comfortable fostering an inclusive computing culture for their students.

At the same time, educators overwhelmingly expressed a desire for the sort of professional learning that PAsmart makes possible: 94 percent of the educators wanted professional learning that would improve their instructional practice in CS and 97 percent felt that their students would benefit from it. However, prior to PAsmart, only 38 percent felt that there was high quality professional learning in CS available to them.

Through PAsmart, eligible entities can apply for funding to provide students with access to high-quality, relevant, and equitable CS and STEM education, and provide current and future educators with high-quality training and professional development to effectively teach CS⁷. Applicants requesting funding for training and professional development **must** commit to using PAsmart funding to offer new or expanded CS/STEM courses in their schools during the grant performance period of January 1, 2020 to June 30, 2021.

Priority will be given to proposed initiatives that leverage partnerships and data to:

- **Expand access, opportunity** to high-quality CS/STEM courses and programs for Pennsylvania’s preK-12 students, with a focus on increasing learning opportunities for students in grades preK-8;
- **Increase the number of educators** prepared to teach CS/STEM courses, including courses of rigor⁸, in preK-12 public schools through new and expanded educator preparation, training, and professional development; and

⁷ Professional development activities should be sustained (i.e., not stand-alone or one-day), intensive, collaborative, job-embedded, data-driven and classroom-focused. See Every Student Succeeds Act (ESSA), § 8101(42).

⁸ The Pennsylvania Department of Education defines “rigorous courses of study” as Advanced Placement (AP), International Baccalaureate (IB) and dual credit coursework and PDE-approved CTE programs of study.

- **Boost inclusion** in CS/STEM education for women, girls, students of color, students in rural and urban areas, students with disabilities, over age under credit learners, and other historically underserved and underrepresented populations.

Targeted PreK-12 Computer Science & STEM Education Grants

PAsmart Targeted PreK-12 CS & STEM Education grants (“Targeted Grants”) are structured to meet the needs of LEAs and their schools with few to no CS/STEM offerings. Targeted Grants will fund two options of programming:

- **Option 1:** LEAs may request funding to send teams of educators and administrators to PDE-designed professional development (see Appendix A), which is aligned to the CSTA standards and the K-12 Computer Science Framework. LEAs attending the PDE professional development will:
 - Build a district wide comprehensive computer science plan, and
 - Learn CS standards, pedagogical approaches, and principles appropriate to their respective grade levels and learn how to incorporate those standards, approaches, and principles into their curriculum, courses, and/or integrative experiences.⁸
- **Option 2:** LEAs may request funding to support alternative professional learning by an expert STEM/CS institution. LEAs selecting this option will be required to complete an alternative application detailing the professional learning experiences, budget, and implementation plan. The alternative professional learning must incorporate evidence-based approaches and be aligned to the CSTA standards⁹ and the K-12 Computer Science Framework.
- **Prerequisite:** All PAsmart Targeted Grant recipients will be required to engage a 1-day comprehensive planning workshop on SCRIPT, a comprehensive planning tool for computer science education.

Eligibility

Any local education agency (school district, career and technology center, charter school, cyber charter school, intermediate unit) that did not receive a PAsmart Targeted Grant in fiscal year 2018-2019 in Pennsylvania is eligible to apply for a 2019-20 PAsmart Targeted Grant.

Only one application will be accepted from each LEA. The application may include educators from more than one school within the LEA.

To accomplish the goals set forth in the Governor’s PAsmart Framework, LEAs will be expected to assess their specific PreK-12 needs and provide statistical data to support their proposal. This data may include, but is not limited to, relevant institution policies and programs, local market information, and other institutional data (enrollment, demographics, etc.).

⁹ In January 2018, the State Board of Education approved the Computer Science Teachers Association (CSTA) standards to guide CS work across the Commonwealth.

Fiscal Agent

The applicant LEA will serve as the fiscal agent for the grant. The fiscal agent will receive, manage, and disburse grant funds.

Funding

Each eligible LEA may receive a maximum Targeted Grant award of \$35,000.

The performance period begins January 1, 2020 and ends June 30, 2021.

Grant funds must support educators participating in the PDE-approved CS/STEM training.

Eligible expenses include, but are not limited to:

- Staff time to participate in grant activities;
- Reimbursement costs incurred for the participation and replacement for educators who are participating in grant activities;
- Training to implement hardware, products, and resources purchased to support CS/STEM implementation;
- Certification experiences, certification exams, if applicable; and
- Eligible CS/STEM hardware, products, and training to implement CS education in the classroom (see Appendix C).

Funding Priorities

For Targeted Grants, priority consideration will be given to proposals that:

1. Address the goals of the Governor's PAsmart initiative;
2. Demonstrate the greatest ability to increase equity of access, opportunity, and inclusion in CS and STEM education;
3. Present the highest need for CS/STEM programming (i.e., schools that currently have zero offerings in LEAs with zero offerings);
4. Focus on training and professional development for teachers in grades preK-8 to support awareness and integration of CS/STEM; and
5. Include teams of educators from diverse grade levels and/or include at least one administrator and/or school counselor from the LEA.

Eligible Programs and Expenses

An LEA may have educators participate in PDE-designed training at no additional cost or may request approval for educators to participate in another professional development opportunity that meets PDE criteria. Professional development criteria are outlined in Appendix B.

In addition to PDE-approved training, the following programs or activities will be considered for funding:

1. Hardware offerings such as programmable robots, objects such as drones, or other IOT (Internet of Things) devices, physical computing devices, and the associated software that allows students to learn how to code them, such as Raspberry Pi, Crumble, and/or Microbit;
2. Associated sets of laptops, tablets, etc.;
3. Trainings and workshop-based professional development to supplement hardware offerings; and
4. Consultative professional development that provide long-term support to build program capacity for existing CS and STEM education.

Due to limited funding, only items and activities directly related to eligible programs and activities covered in this request for application will be funded. Funding is not guaranteed. For more details regarding eligible uses of funding, refer to the appendices.

All budgets will be reviewed to evaluate appropriateness and connection to proposed grant activities and goals.

Review Process and Criteria

Applications will be reviewed for:

1. Alignment to the goals of the Governor's PAsmart initiative, as detailed in the framework approved by the PA WDB;
2. Program and activity narrative for which funding will be used, including details of how the proposed program/activity will improve a school's capacity to offer CS/STEM education, maintain sustainable programming and training, and address barriers of access for high-need and underrepresented students;
3. Detailed budget information that supports the goals and objectives of the proposal;
4. Measurable outcomes; and
5. Accuracy of the information submitted.

Applications that do not include all required information as stated on the application will not be considered, and those that include more than 25 percent of unallowable expenses will not be considered. All qualifying applications will be reviewed and scored.

Proposals will be considered based on the following criteria:

1. Goals and Objectives – Goals and objectives of the program are clearly stated and align to the goals of the Governor's PAsmart initiative.
2. Proposal Narrative – The proposal includes a detailed description of the program(s) to be implemented and activities to be conducted to support the implementation of the program(s).

3. Expected Program Outcomes and Assessment – Outcomes are stated in measurable terms including baseline information and expected improvement, and there is a clear plan for assessing the impact of the program being funded through the grant.
4. Budget information – Budget information is accurate.

Application Process

PreK-12 Targeted Computer Science and STEM Education Grant applications will be submitted via the state eGrants system. Applications must be submitted via eGrants no later than 11:59 PM on Friday, December 20, 2019. All application materials are provided on the education.pa.gov/PAsmart.

To apply:

1. Determine the person within the LEA who will fill out and submit the application, which is accessible only through eGrants, an online grants management system.
2. Submit a brief [online form](#)¹⁰ providing the name and basic contact information of the designated person, which will enable them to access the application in the eGrants system. Please allow one week after submission of this form to obtain access.
3. Review the application questions and coordinate within the LEA and with any partners, if applicable, to answer the application questions. Applicants are strongly advised to write application responses in a separate document before filling out the application in eGrants.
4. Attend the webinar for additional information about the grant and application process.
5. Direct any questions and requests for technical assistance to PAsmart@pattan.net.
6. Submit the completed application in eGrants by 11:59 PM on Friday, December 20, 2019.

Questions regarding the grant application process must be sent to PAsmart@pattan.net. PDE will periodically post responses to questions on the Department of Education website for all applicants to review.

¹⁰ The form for Targeted Grant applicants is available at:
<https://forms.office.com/Pages/ResponsePage.aspx?id=QSiOQSgB1U2bbEf8Wpob3odpKZ6qbVdMuTNkQ0Ku38xUM1ISMIZGSFFISVBDSDJESjMyUDq0MzkwTy4u>

Advancing Computer Science & STEM Education Grants

Advancing Grants are designed to support broad, cross-sector partnerships that are using ecosystem or networked approaches to:

- Expand access to CS/STEM education and promote inclusion (especially for historically underserved students and communities) through learning experiences such as integrative CS/STEM experiences, standalone CS/STEM courses, out-of-school learning, dual enrollment, industry credentials, work-based learning, internships, and apprenticeships; and
- Expand and diversify the number of CS/STEM educators at all education levels.

Advancing Grants will support partnerships that operate on a larger scale and provide quality CS/STEM experiences to learners of any age—early childhood, preK-12, postsecondary, and adult learners—as part of a high-level strategic approach to CS/STEM workforce readiness.

Advancing Grants are expected to fully align to the Governor’s PAsmart Framework:

- **Data-driven Innovation** – Proposals must identify a clear problem, challenge, or opportunity supported by relevant data, and include an innovative strategy to increase access and equitable access to CS/STEM opportunities in Pennsylvania.
- **Cross-sector Partnership** – Proposals must demonstrate strong, high-quality partnerships committed to working collaboratively to implement the proposal. Applicants are encouraged to have multiple partners across sectors.
- **Equity, Diversity and Inclusion** – Proposals must demonstrate a commitment to serve and increase access for all types of students, including those with exceptionalities, high-poverty students, adult learners, and female, African American, Latino and Native American students.
- **Capacity Building** – Proposals must build capacity to offer CS/STEM programming.
- **Leveraging Existing Resources** – Proposals must demonstrate that resources from the grant will leverage and supplement, not supplant, existing resources.
- **Performance Outcomes** – Proposals must include measurable performance outcomes and a strategy to collect, analyze and report those outcomes. Proposals must include strong goals aimed at increasing the percentage of students, course/program offerings, and trained educators in CS/STEM.

Examples of previously funded projects are found on the Pennsylvania Department of Education’s website listing [current PAsmart Advancing Grant projects](#).

Eligibility

Eligible proposals must have a lead applicant, a fiscal agent, and a partnership.

To expedite the contracting process, proposal submission is limited to the following entities that have access to eGrants:

- LEAs (school districts, charter schools, cyber charter schools, career and technical centers (CTCs), and Intermediate Units (IUs);
- Postsecondary institutions; and
- Public libraries.

A **lead applicant** may be any organization identified in the list of eligible partners¹¹. Lead applicants are encouraged to generate a cross-sector proposal and apply as a consortium. Proposals initiated by lead applicants other than those partners listed above are strongly encouraged; note, however, that only those organizations with access to eGrants can submit the application.

Fiscal Agent

Only LEAs, postsecondary institutions, and public libraries, as defined under “Eligibility,” may serve as the fiscal agent for the grant. The fiscal agent will receive, manage, and disburse grant funds. Fiscal agents may use funds to pay partners in the consortium for their services. An LEA may serve as a fiscal agent for more than one application.

Partnership Requirements

Local support and collaborative efforts from business, industry, education, philanthropic, nonprofit, and community partners are essential to the success of PAsmart programs. To be considered for funding, lead applicants must identify partners to assist with:

- Expanding access and inclusion to CS/STEM education, and
- Expanding and diversifying the number of CS/STEM educators statewide.

Eligible partners include:

- LEAs (school districts, charter schools, cyber charter schools, CTCs, and IUs);
- Early childhood learning centers;
- Postsecondary institutions;
- Public libraries;
- Community-based organizations or institutions (out-of-school time providers, etc.);

¹¹ See eligible partners list on pages 17 and 18 of the RFA.

- Local workforce development boards;
- Businesses and chambers of commerce;
- Labor organizations;
- STEM Ecosystems;
- Trade associations;
- Non-profits; and
- Economic development entities.

Funding

Eligible applicants may request up to \$500,000. Funding is not guaranteed to any applicant.

The performance period begins January 1, 2020 and ends June 30, 2021.

Funding Priorities

Priority will be given to proposals that address the goals of the Governor’s PAsmart Grant Initiative, demonstrate the highest-leverage expansion of access and equity of access to CS/STEM programming, and expand access in areas with the highest need.

In addition to the goals outlined in the PAsmart Framework, funding priorities include, but are not limited to, the following:

- Connecting educators with industry level professionals;
- Creating career exploration/career pathways;
- Focusing on preK-8 educators and educators who are mid-career (those with 3-8 years of service);
- Developing or expanding Master Teacher Fellowship, Residency, and/or Apprenticeship Models;
- Aligning learning experiences with labor market priorities;
- Building partnership models that have a deep understanding of collective impact and start, expand, or accelerate STEM ecosystems;
- Building cross-sector alignment with regional initiatives (e.g., local preK-12 Guidance Plans, WIOA State, Regional and/or Local Plans, industry cluster analyses, etc.);
- Integrating computer science into existing math, science, humanities, arts, and English Language Arts coursework, or coursework in career and technical education (CTE);
- Creating secondary CS/STEM course offerings; and
- Addressing policy and regulatory barriers to expanding CS/STEM offerings.

Due to the limited funding, only items and activities directly related to eligible programs and activities covered in this request for application will be funded by the PAsmart Grant Program.

All budgets will be reviewed to evaluate appropriateness and connection to proposed grant activities and goals.

Matching funds are not required. However, priority will be given to applications with matching contribution from grant partners or other entities.

Review Process and Criteria

Applications will be reviewed by a cross-sector team for the following:

1. Alignment to the goals of the Governor's PAsmart initiative, as detailed in the framework approved by the PA WDB;
2. Program and activity narrative for which funding will be used, including details of how the proposed program/activity will improve a school's capacity to offer regular CS content, maintain sustainable programming and training, and address barriers of access for high need and underrepresented students;
3. Detailed budget information that supports the goals and objectives of the proposal;
4. Measurable outcomes; and
5. Accuracy of the information submitted.

Applications that do not include all the required information as stated on the application will not be considered for funding. Applications that include more than 25 percent of unallowable expenses will not be reviewed or scored. All qualifying applications will be reviewed and scored.

Proposals will be considered based on the following criteria:

1. Goals and Objectives – Goals and objectives of the program are clearly stated and align to the goals of the Governor's PAsmart Program.
2. Proposal Narrative – The proposal includes a detailed description of the program(s) to be implemented and activities to be conducted to support the implementation of the program(s).
3. Budget information – Budget information is accurate and itemized using a per-unit cost and total expenditure. A total of all expenditures is summarized into three categories: Contracted Services, Supplies and Other.
4. Expected Program Outcomes and Assessment – Outcomes are stated in measurable terms including baseline information and expected improvement, and there is a clear plan for assessing the impact of the program being funded through the grant.

To accomplish the goals set forth in the Governor's PAsmart Framework, applicants must assess their risk factors and needs, and provide statistical data to support their proposal. Data may include, but is not limited to, the following:

- Relevant policies and programs;
- School and community data, such as student enrollment, demographics, etc.; and
- Regional labor market information.

Application Process

Advancing Computer Science and STEM Education Grant applications must be submitted via the state eGrants system. Applications must be submitted via eGrants no later than 11:59 PM on Friday, January 10, 2020. Application materials are provided on the education.pa.gov/PAsmart.

To apply:

1. Determine the person within the LEA, postsecondary institution, or public library who will fill out and submit the application, which is accessible only through eGrants, an online grants management system.
2. Submit a brief [online form](#)¹² providing the name and basic contact information of the designated person, which will enable them to access the application in the eGrants system. Please allow one week after submission of this form to obtain access.
3. Review the application questions and coordinate with partners to answer the application questions. Applicants are strongly advised to write application responses in a separate document before filling out the application in eGrants.
4. Attend an applicant webinar for more explanation about the grant and application process.
5. Direct any questions and requests for technical assistance to PAsmart@pattan.net.
6. Submit the completed application in eGrants by 11:59 pm on Friday, January 10, 2020.

Questions regarding the grant application process must be sent to PAsmart@pattan.net. PDE will periodically post responses to questions on the Department of Education website for all applicants to review.

¹² The form for Advancing Grant applicants is available at:
<https://forms.office.com/Pages/ResponsePage.aspx?id=QSiOQSgB1U2bbEf8Wpob3odpKZ6qbVdMuTNkQ0Ku38xUQVVTQzNKWIFXUUZWMVAzREVOTDdIMzhBNy4u>

Appendix A: PreK-12 CS/STEM Professional Development Opportunities

Below are professional development opportunities available to educators at no cost and approved by PDE. Educators are strongly encouraged to take advantage of these opportunities, all of which are provided by intermediate units in the commonwealth, qualify for Act 48 professional development credit through PDE, and do not require the use of additional grant funding.

PDE Designed Training:

PAsmart K - 8 Pathway

The K-8 PAsmart Targeted Grant cohort is an evidence based professional learning pathway that includes six days of facilitated, in-person professional learning as well as twelve hours of embedded online learning. Participants will explore ways of teaching computer science while mastering core computer science competencies. Participants will:

- Access, use, and demonstrate knowledge of the [K-12 Computer Science Framework](#) and [Computer Science Teachers Association Standards](#);
- Demonstrate the need for computer science as a core educational literacy and as a driver of innovation in our communities;
- Design, initiate and reflect on a small-scale implementation pilot;
- Recognize and create a plan to close equity gaps in computer science education, specifically for students with disabilities and other historically underrepresented populations, such as students of color, English language learners and female students and
- Leverage community and stakeholder partnerships to accelerate computer science learning experiences for every learner.

Each participating PAsmart Targeted Grant recipient will construct a computer science comprehensive plan using the [SCRIPT](#) framework. Using SCRIPT planning tools and resources as a guide, participants set individual and school/district goals for expanding computer science access and inclusion for every student, including plans for a small-scale implementation pilot that either creates a new computer science course or integrates computer science into existing content areas and curricula. Over the course of the cohort, participants are expected to develop and share artifacts (via online platform) to demonstrate progress towards their goals.

It is expected that as part of the K-8 professional learning pathway grant dollars will be used to secure substitute teachers and cover participants' travel expenses to attend the workshops.

The K-8 Pathway is coordinated and facilitated by the PAsmart Design Team. Additional support is provided by the Intermediate Units.

The K-8 pathway is not an experience currently leading to a computer science certification or computer science endorsement.

Questions: PAsmart@pattan.net

Who?

The K-8 Pathway supports K-8 educators who currently or will soon teach computer science. The pathway assumes no prior experience with computer science and supports all K-8 implementation models (i.e. stand-alone CS course or integrated across content areas)

What?

The K-8 Pathway includes six days of facilitated, in-person professional learning as well as twelve hours of embedded online learning. 54 hours of Act 48 credit is provided for full participation of the in-person and online activities. Participants engage with CS concepts, experience instructional practices, and explore strategies for engaging stakeholders.

Where?

The K-8 Pathway is a cohort experience, with cohorts hosted at locations in the western, central, eastern, and northern regions of Pennsylvania. The Schoology learning management system serves as the platform for all asynchronous online activities and additional opportunities for collaboration.

When?

The K-8 Pathway begins in January 2020 with the first two days on in-person workshops. A suggested timeline for the completion of the asynchronous, online activities is provided, as the activities loosely follow the scope and sequence of the workshops. All K-8 Pathway activities are scheduled to conclude by September 2020.

Why?

The K-8 Pathway increases the number of CS-ready educators at participating LEAs. Through the K-8 model, educators become equipped and prepared to implement high-quality, standards-aligned CS experiences for students.

How?

The K-8 Pathway was created by PaTTAN with support from Allegheny Intermediate Unit and Delaware County Intermediate Unit.

Timeline: West, Central, and Eastern K-8 Cohorts

	January	February	March	April	May	June	July	August
Cohort Workshops	Days 1 - 2		Day 3		Days 4 - 5			Day 6
Online Activities	3 hours	3 hours	3 hours	5 hours	5 hours	4 hours	4 hours	4 hours

Timeline: Northern Tier K-8 Cohorts

	August	September	October	November	December	January	March	April
Cohort Workshops	Days 1 - 2		Day 3		Days 4 - 5			Day 6
Online Activities	3 hours	3 hours	3 hours	5 hours	5 hours	4 hours	4 hours	4 hours

Cohort Objectives & Goals

1. Access and use the K-12 Framework and CSTA Standards

Workshops 1-2	Workshop 3	Workshops 4-5	Workshop 6
Be aware of the K-12 CS Framework and the CSTA Standards and their role in our work moving forward	Be aware of the K-12 CS Framework and the CSTA Standards and their role in our work moving forward	Examine the CS framework & standards	
Explore foundational CS concepts through unplugged, plugged, and physical computing	Explore foundational CS concepts through unplugged, plugged, and physical computing	Explore foundational CS concepts through unplugged, plugged, and physical computing	Explore foundational CS concepts through unplugged, plugged, and physical computing

Workshops 1-2	Workshop 3	Workshops 4-5	Workshop 6
Explore foundational CS concepts of Algorithms & Programming		Explore foundational CS concepts of Networks & the Internet	
Explore foundational CS concepts of Algorithms & Programming		Explore foundational CS concepts of Computing Systems	
Examine physical devices that align with CS concepts and practices			

2. Articulate the need for CS in education and communities

Workshops 1-2	Workshop 3	Workshops 4-5	Workshop 6
Define CS		Create a plan to engage stakeholders in CS implementation pilot	
Craft a mission and vision for CS	Craft a mission and vision for CS	Craft a mission and vision for CS	
Communicate why CS is important to your community			

3. Initiate and reflect on small-scale implementation pilot

Workshops 1-2	Workshop 3	Workshops 4-5	Workshop 6
	Develop goals and action steps for CS implementation pilot	Develop goals and action steps for CS implementation pilot	Develop goals and action steps for CS implementation pilot
	Reflect on CS implementation and progress	Reflect on CS implementation and progress	Reflect on CS implementation and progress

4. Recognize and create a plan to close equity gaps, specifically for students with disabilities and other historically underrepresented populations such as students of color and female students

Workshops 1-2	Workshop 3	Workshops 4-5	Workshop 6
Address equity gaps in implementation pilot planning	Address equity gaps in implementation pilot planning	Address equity gaps in implementation pilot planning	Address equity gaps in implementation pilot planning
		Draw correlations between identity, equity, & accessibility	
		Apply the principles of Universal Design for Learning & culturally responsive teaching to CS lessons	

5. Leverage community and stakeholder partnerships

Workshops 1-2	Workshop 3	Workshops 4-5	Workshop 6
Communicate why CS is important to your community		Create a plan to engage stakeholders in CS implementation pilot	

Special Learning Opportunities

PA CS FOR ALL Summit June 25-26, 2020	Virtual Discussions
The Summit offers educators, school leaders, and stakeholders opportunities to expand their knowledge and skills so they can support students with computer science experiences.	Each facilitated hour-long virtual discussion centers around a specific CS topic, resource, or practice. Discussions are recorded and archived in the K-8 Pathway Schoology.

PAsmart 7-12 Pathway

Educators engaging in the 7-12 pathway will build and demonstrate knowledge of the [K-12 Computer Science Framework](#) and the [Computer Science Teachers Association Standards](#) (Impacts of Computing, Algorithms and Computational Thinking, Programming, Data, and Computing Systems). Educators will gain a deep understanding of how to design and deliver universally designed and culturally relevant computer science instruction to diverse learners.

LEAs will have an educator ready to take the 7-12 computer science certification exam and to offer a standards-aligned high school computer science course during the 2021-2022 school year utilizing evidence-based culturally responsive pedagogical practices to meet the needs of diverse learners. As a result of engaging in the [SCRIPT workshop](#), LEAs will have a comprehensive computer science PreK-12 plan articulating the vision, goals, priorities, and pathways for computer science in their community.

Educators are expected to engage in a series of differentiated in-person and online experiences that provide 129 hours of Act 48 credit. The 7-12 pathway begins in Summer 2020 with a 3-day (28 hour) computer science bootcamp designed and delivered by higher education faculty, industry partners and computer science experts from across Pennsylvania. Additional differentiated supports will be provided by undergraduate and graduate computer science students to meet participants needs in building computer science content knowledge.

In fall of 2020 participants will engage in a 40-hour online computer science course designed by [WeTeachCS \(University of Texas Austin\)](#). The course is designed to engage participants in five separate modules aligned to the CSTA standards: Impacts of Computing, Algorithms and Computational Thinking, Programming, Data and Computing Systems and Networking.

Starting in January 2021 participants will engage in a series of in-person sessions (30 hours) to continue building competence and applying newly gained computer science content knowledge.

In the spring of 2021 educators will engage in an online computer science equity course (24 hours), designed by [WeTeachCS](#) with the intent of building skills in universal design for learning, culturally responsive instruction and additional instructional approaches in computer science to ensure educators can deliver computer science to diverse learners. The pathway will be completed with a final bootcamp day at the June 2021 CSforALLPA Summit.

Educators engaging in the 7-12 pathway will be supported by higher education faculty, computer science undergraduate and graduate students, the PAsmart Design Team, PaTTAN, Intermediate Units and other computer science experts. This pathway will prepare learners to become a Pennsylvania 7-12 certified computer science educator, but does not lead directly to a Pennsylvania certification.

Registration will be available via [PaTTAN](#) by January 2020.

Questions: PAsmart@pattan.net

Who?

The 7-12 Pathway will support middle and high school (7-12) educators who currently are or will soon be teaching a computer science course. The pathway is differentiated for different skilled learners, taking into account new educators or educators currently teaching a computer science course in Pennsylvania.

What?

The 7-12 Pathway includes 7 days of facilitated, in-person professional learning as well as 64 hours of embedded online learning. Hours of Act 48 credit will be provided for full participation of the in-person and online experiences. Participants build understanding of computer science concepts, practices, instructional practices, apply content knowledge through the exploration of physical computing and build strategies for engaging stakeholders.

Where?

The 7-12 Pathway is a cohort experience, with learning locations in the western, central, eastern, and northern regions of Pennsylvania. The CANVAS learning management system serves as the platform for all asynchronous and synchronous online learning and additional opportunities for collaboration.

When?

The 7-12 Pathway begins in June 2020 with the 3 days in-person bootcamp. A suggested timeline for the completion of the asynchronous, online course, subsequent in-person professional learning, and webinars will be provided to all participating LEAs. All 7-12 Pathway activities are scheduled to conclude by June 2021

Why?

The 7-12 Pathway increases the number of computer science ready educators at participating LEAs. Through the 7-12 Pathway, educators become equipped and prepared to implement high-quality, standards-aligned computer science experiences for diverse learners.

How?

The 7-12 Pathway was designed based on computer science education research collaboration with national partners, local computer science experts, and guidance from higher education faculty from across Pennsylvania.

Timeline:

	June 2020	September- November 2020	January- April 2021	May- June 2021	June 26, 2021
Cohort Workshops	Boot Camp 3 Days	Asynchronous WETEACH online computer science course focused on core content	In person professional learning sessions	Asynchronous WeTeachCS online computer science course focused on equity and universal design for learning	Final in person Day as part of CSforAll Summit
Online Activities	29 hours	40 hours	30 hours	24 hours	6 hours

Special Learning Opportunities

PA CS FOR ALL Summit June 25-26, 2020	Webinars September 2020-May 2021
The Summit offers educators, school leaders, and stakeholders opportunities to expand their knowledge and skills so they can support students with computer science experiences.	Each facilitated 60 - 90 minute webinar will provide participants opportunities to explore physical computing, discuss specific CS topic, resource, or practices. Discussions are recorded and archived for asynchronous engagement.

Appendix B: Alternative Workshop Approval for Targeted Grants

Criteria for Alternative CS Workshop Approval

Many nonprofits, postsecondary institutions, Intermediate Units, and technology companies offer workshops for schools who have educators interested in developing and expanding computer science offerings. Professional learning in computer science is often offered as series of experiences throughout the year with the intent to build educators (with little to no prior computer science experience) understanding of basic computer science content and pedagogy.

Alternative workshops approved for grant funding must be aligned to the PAsmart Framework outlined in the Request for Application and meet the following criteria:

Equity: Opportunity, Access, and Inclusion

- Must provide professional learning that is evidence based and aligned to the [CSTA standards](#), [K-12 Computer Science Framework](#), and other appropriate content related standards;
- Must provide professional learning in culturally responsive computer science pedagogical practices that help to ensure computer science content is accessible to every student, including, but not limited to, students with exceptionalities, English language learners, female students, and African American, Latino and Native American students along with all other historically underserved populations of learners.

Implementation: PreK-12

- Professional learning must prepare educators to provide computer science programming immediately following the experience.
- Professional learning must prepare educators to provide integrative computer science experiences or stand-alone computer science experiences.
- Professional learning must provide the resources, content knowledge, and pedagogical understanding to make computer science experiences accessible to every student.
- Professional learning must prepare educators to provide computer science programming that is aligned to CSTA standards and K-12 Computer Science Framework.¹³

Capacity: Administration to Educator

- Targeted Grant Recipient must have a [SCRIPT plan](#) or go through the SCRIPT comprehensive planning workshop with PDE or a local intermediate unit.

¹³ In January 2018, the State Board of Education approved the Computer Science Teachers Association (CSTA) standards to guide CS work across the Commonwealth.

- Professional learning must include at least four staff per LEA who will be implementing computer science experiences.
- Professional learning must engage at least one administrator.

This approval document must be submitted with the application as part of Question 21 if the applicant chooses an alternative professional learning model.

If participants choose not to attend the pre-approved trainings, the LEA will need to apply for approval as part of the grant application process. A request for approval form is attached to the Targeted Grant application and must be submitted along with the application by the deadline.

Application Questions for Alternative Workshop Approval

Section 1 – Please answer the following questions to match the main application.

1. **Applicant Name:** [Click here to enter text.](#)
2. **Applicant Address:** [Click here to enter text.](#)
3. **Primary Contact for Application:**
 - a. **Name:** [Click here to enter text.](#)
 - b. **Title:** [Click here to enter text.](#)
 - c. **Email:** [Click here to enter text.](#)
 - d. **Phone:** [Click here to enter text.](#)
4. **Applicant LEA:** [Click here to enter text.](#)

Section 2 – Please answer the following questions about the alternative CS professional development opportunity for which you are seeking approval.

5. Please link the workshop's overview website: [Click here to enter text.](#)
6. Please link the workshop's curriculum: [Click here to enter text.](#)
7. Is the programming for this workshop aligned to CSTA standards? If yes, please link documentation that states the alignment.
[Click here to enter text.](#)
8. How does this workshop train teachers in CS content that is age appropriate? How does it train teachers in content that is accessible to all students, including students with IEPs and exceptionalities, high poverty students, and female, African American, Latino and Native American students?
[Click here to enter text.](#)
9. How does this training meet the implementation and capacity requirements? Explain how it will allow educators to implement programming immediately following the training (if content is delivered at one time) or after the first 2 sessions (if ongoing), implement

programming that can engage at least 20 or more students at a time, for at least a total of 80 students per lesson, and train at least 4 staff per LEA who will be implementing the programming to serve 80 students total.

[Click here to enter text.](#)

10. What sort of CS offering will be put in place after educators participate in this programming? Does the workshop train educators to offer CS content through a standalone class offering for the students, or a series of lessons to be implemented in classes throughout the course of the year, with at least one lesson per unit or at least 8 lessons per year?

[Click here to enter text.](#)

11. What are the dates that the team of educators applying for this grant will attend this CS professional development opportunity?

[Click here to enter text.](#)

Appendix C: Product Offering Criteria and Examples for Targeted Grants

Products, Services, and Trainings Eligible for Targeted Grant Funding and Criteria for Approval

Product Category & Description	Approval Criteria
<p>Hardware:</p> <p>Eligible offerings include programmable robots, physical computing devices, laptops, tablets, and the associated software that allows students to build confidence and competence in computer science.</p> <p>Many the hardware devices are accessible for students across grade levels and can come with content for all grades and can be incorporated in lessons by teachers who have little to no CS experience.</p> <p>To explore eligible offerings, connect with your local Intermediate Unit to learn about their lending libraries and training options.</p>	<p>Equity – Opportunity, Access, Inclusion:</p> <ul style="list-style-type: none"> • Must be age appropriate and culturally responsive to the needs of learners. • Must be accessible to all students, including students with exceptionalities, high poverty students, and female, African American, Latinx and Native American students, and all other historically underserved populations. <p>Capacity for engagement:</p> <ul style="list-style-type: none"> • Objects purchased must be scalable • Objects must be able to be used for multiple learning experiences • Objects could be shared across classes, programs, and communities. • Objects should be capable of engaging small groups of learners, with a focus on meaningful engagement and transferable skill development. • Objects must be paired with the appropriate professional learning for educators to ensure implementation
<p>Workshop-based Professional Development</p> <p>Many reputable nonprofits, postsecondary institutions, IUs, LEAs, and technology companies offer special workshops for schools and educators interested in building computer science and STEM pathways. Computer science and STEM may be integrated into existing curriculum, designed for a standalone</p>	<p>Equity: Access, Opportunity and Inclusion:</p> <ul style="list-style-type: none"> • Must train educators in computer science / STEM content and culturally responsive approaches to teaching. • Must train teachers in content that is accessible to all students, including students with exceptionalities, high poverty students, female, African American, Latinx, Native American students, and historically underserved students. <p>Professional learning must give teachers the capacity to:</p>

Product Category & Description	Approval Criteria
<p>class and/or built into out-of-school time experiences. Professional learning should be offered as a series of intensives longitudinal experiences focused on building educators' confidence, comfort, and understanding of CS/STEM content and pedagogy.</p>	<ul style="list-style-type: none"> • Implement programming immediately following the training • Implement programming that can provide access to and include every learner. • Implement programming that is aligned to CSTA standards and other STEM state standards. • Training must include at least three staff per school who will be implementing the programming to serve at least 60 students at the school. • Professional learning must train educators to offer content through: <ul style="list-style-type: none"> ○ A standalone STEM/CS class for the students, or ○ A series of STEM/CS experiences to be integrated in classes throughout the course of the year, or ○ A series of STEM/CS experiences integrated into afterschool or out-of-school time learning.
<p>Consultative Professional Development</p> <p>Many reputable nonprofits, postsecondary institutions and technology companies offer year-long, consultative services designed to build out a CS/STEM education in a school or across a district.</p> <p>Consultative services should provide long-term support to schools. The support and services should expand computer science / STEM opportunity and access to historically underserved learners along with fostering an inclusive, collaborative culture for computer science / STEM education.</p>	<p>Equity - Access, Opportunity, and Inclusion:</p> <ul style="list-style-type: none"> • Must train teachers in content that is age appropriate and culturally responsive. • Must train teachers in content that is accessible to all students, including students with exceptionalities, high poverty students, female, African American, Latinx, Native American students, and historically underserved students. <p>Professional learning must give educators the capacity to:</p> <ul style="list-style-type: none"> • Implement programming immediately following the training • Expand CS/STEM offerings such that at least 80 students are served regularly through: <ul style="list-style-type: none"> ○ A standalone course offering, and/or ○ A series of experiences integrated into classes throughout the course of the year and/or ○ A series of out-of-school time learning experiences throughout the year

Examples of Eligible Resources, Technology and Professional Development:

Below is a list of eligible resources, technology, and professional development. This list is not exhaustive, and the suggestions are not mandated. Grantees are encouraged to select the resources that best meet their local needs.

Elementary – Middle – High School

Hardware	Workshops, Curricular Resources, Learning platforms	Consultative Professional Learning
<ul style="list-style-type: none"> • Humming Bird Robotics • Tynker • CS Unplugged • Microbit • Raspberry Pi • ScratchED • Cubetto • Arduino • Bee-Bot • Osmo • Puzzlets • Makey Makey • Ozobots • Sphero 	<ul style="list-style-type: none"> • VidCode • Republic CS • Globaloria • Code Monkey • Code.org • Apple Everyone Can Code • C-STEM • Beauty and Joy of Coding • Bootstrap 	<ul style="list-style-type: none"> • BootUp • Project Lead the Way • Microsoft TEALS • Edhesive • Exploring CS • CMU CS Academy • Code HS • Intermediate Unit • Postsecondary Institution

Appendix D: PAsmart Grant Information and Timeline

PAsmart will address local, regional, and statewide workforce, education, and economic needs aligned with state-level priorities through three grant initiatives:

1. Expanding Computer Science and STEM Education – up to \$20 million
2. Growing Registered Apprenticeships and Pre-Apprenticeships - up to \$7 million
3. Supporting Next Generation Industry Partnerships - up to \$4.6 million

Application Process

Information specific to each PAsmart grant initiative can be accessed through the PAsmart website at: education.pa.gov/PAsmart.

Proposed Timeline and Grant Period

PAsmart funding is anticipated to be used for grant-related activities between January 1, 2020, and June 30, 2021 (for PAsmart Expanding Computer Science and STEM Education Grants). All selected grantees will be required to sign the appropriate agreement with either the Pennsylvania Department of Education or the Pennsylvania Department of Labor, unless otherwise noted. The agencies observe the right to seek repayment of funds if it is determined that funds were not utilized for the original stated and approved purpose. Applicant costs incurred outside the grant period outlined in the appropriate agreements are not the responsibility of the commonwealth.

Award Administration

The commonwealth may enter into discussions with a selected applicant for any reason deemed necessary, including but not limited to: (1) the budget is not appropriate or reasonable; (2) only a portion of the application is selected for award; (3) the commonwealth needs additional or clarifying information; and/or (4) special terms and conditions are required. Failure to satisfactorily resolve the issues identified by the commonwealth within a specific period determined by the commonwealth may preclude award to the applicant.

The commonwealth reserves the right, without qualification, to reject any or all applications received in response to this announcement and to select any application, in whole or in part, as a basis for negotiation and/or award. The contracting officer is the only individual who can make awards or commit the commonwealth to the expenditure of public funds. A commitment by other than the contracting officer, either explicit or implied, is invalid.

Program Reporting and Evaluation

Grantees will be required to submit program and fiscal reports during and upon conclusion of the funded project. All required forms will be supplied by the commonwealth and outlined in the award package. For PAsmart Expanding Computer Science and STEM Education Grants, all

close-out final reports are to be submitted no later than August 30, 2021, or within 60 days of full award expenditure (whichever occurs first). In addition to report submissions, awardees are required to participate in routine calls with commonwealth staff, unless otherwise determined, to identify grant progression, share best practices and receive technical support. Additional information will be provided upon award selection.

Vendor Registration

All awardees must be registered with the commonwealth as a vendor, unless current agreements are already in place. Applicants that are not current vendors are strongly encouraged to begin this process by registering their company with the Vendor Data Management Unit (VDMU) at <http://www.vendorregistration.state.pa.us> or by calling 717-346-2676 or 1-877-435-7363.

Contact

Due to procurement requirements and effective coordination, commonwealth staff are not able to answer any PAsmart funding opportunity questions that are communicated to them directly. Questions related to the 2019 PAsmart Expanding Computer Science and STEM Education Grants must be directed to PAsmart@pattan.net.

Key Dates for PAsmart Expanding Computer Science and STEM Education Grants

Date/Time	Specifics	Funding Initiative
November 22, 2019	Release of PAsmart Solicitations	PAsmart - \$30 million
December 3, 2019 at 8am	Webinar: Targeted Grants	Targeted PreK-12 Computer Science & STEM Education
December 3, 2019 at 8:30am	Webinar: Advancing Grants	Advancing Computer Science & STEM Education
December 16, 2019 at 8am	Webinar: Targeted Grants	Targeted PreK-12 Computer Science & STEM Education
December 16, 2019 at 8:30am	Webinar: Advancing Grants	Advancing Computer Science & STEM Education
December 20, 2019 at 11:59pm	Application Deadline for Targeted Grants	Targeted PreK-12 Computer Science & STEM Education
January 10, 2020 at 11:59pm	Application Deadline for Advancing Grants	Advancing Computer Science & STEM Education