Collaborate to Innovate

Advance Common Core and Next Generation Science Standards Through K-12 and Expanded Learning Program Partnerships

California AfterSchool Network
CONNECT. CONVENE. INSPIRE.

New Standards, New Opportunities

K-12 institutions and expanded learning programs can form partnerships that increase positive youth outcomes while meeting the goals identified through new state standards.

- New state standards include the Common Core State Standards (CCSS), The Next Generation Science Standards (NGSS), and Quality Standards for Expanded Learning Programs.
- Key elements of CCSS (especially the Standards for Mathematical Practice and the Capacities of a Literate Individual) and NGSS (especially the Science and Engineering Practices) have strong intersections with the Quality Standards for Expanded Learning Programs (especially Active and Engaged Learning, Youth Voice and Leadership, Skill Building, Collaborative Partnerships, and Continuous Quality Improvement).

> "The economic realities of the new economy are clear: STEM skills are going to be essential for this generation. Tomorrow's workers will be called on not just to keep up, but to innovate… Expanded learning programs offer an outstanding opportunity for children to dig into STEM subjects, to roll up their sleeves and learn vital skills, and become excited about STEM topics."
>
> *- Dr. Gregory Washington*
> *Dean of the UCI Samueli School of Engineering*

How K-12 and Expanded Learning Partnerships Can Advance STEM Learning

Expanded learning programs (before and after school, summer, and intersession learning programs) offer a flexible learning environment to reinforce concepts introduced in the classroom, advance new standards, nurture student interest, and build relevant STEM skills. STEM learning opportunities in expanded learning programs can:

- **Maximize every hour of learning.** California has nearly 5,000 expanded learning programs that serve close to 500,000 K-12 students each day, offering the equivalent of 91 additional school days each year to students at schools in under-resourced communities.
- **Narrow the achievement gap.** After school program participation has been shown to narrow the math achievement gap between students from low-income families and students from higher-income families.[1]
- **Engage traditionally under-represented groups in STEM learning.** STEM learning opportunities in expanded learning programs can intentionally support youth historically under-represented in STEM, including girls, English Learners, foster youth, and economically disadvantaged youth.
- **Increase inquiry and quality.** STEM partnerships[2] with expanded learning programs are associated with increased inquiry and connection to youth interests, and collaborating with community partners is part of the state plan for NGSS implementation.
- **Address the needs of families.** Most California parents believe that expanded learning programs should offer STEM learning opportunities, and parents with children in expanded learning programs report high levels of satisfaction with STEM learning opportunities.[3]
- **Advance new state standards and funding priorities.** Expanded learning programs are an essential resource to advance new standards and district Local Control Funding Formula priorities.
- **Inspire the next generation of innovators.** STEM learning opportunities in expanded learning programs offer students the opportunity to practice 21st Century Skills such as collaboration and problem-solving, increase interest and engagement in STEM through hands-on learning, and equip students with the skills to meet the demands of the 21st Century workforce.

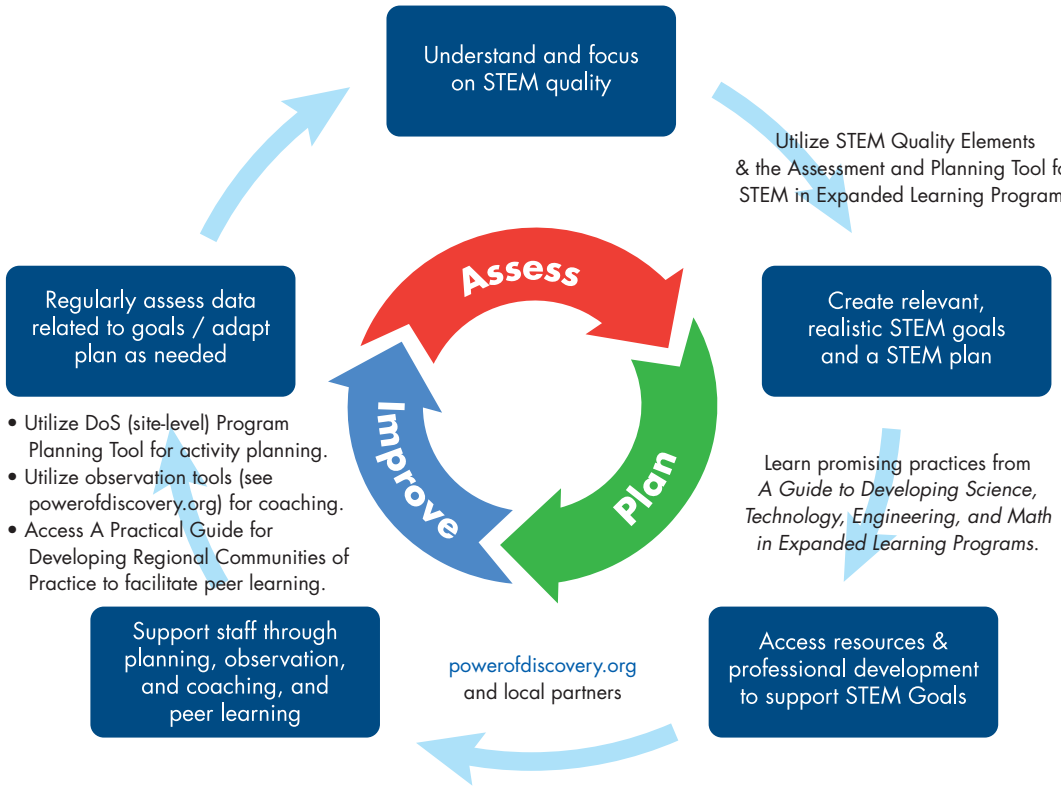
Collaborate to Innovate

Strategies for K-12 and expanded learning program collaboration to advance STEM learning, Common Core State Standards, Next Generation Science Standards, and Quality Standards for Expanded Learning in California.

- **Create a shared understanding** of how implementing quality STEM learning in expanded learning programs is supportive of multiple K-12 standards and funding priorities as well as Quality Standards for Expanded Learning.
- **Create a shared, mutually beneficial plan** to increase the quantity and quality of cohesive STEM learning opportunities between the core instructional day and the expanded learning program.
- **Increase student engagement and achievement** in STEM through intentional partnerships between the expanded learning programs, core instructional day professionals, and County and/or District STEM-related curriculum specialists or teachers on special assignment.
- **Seek local partners** such as science museums, higher education institutions, community organizations, business & industry, and philanthropy to increase impact of specific elements of your shared STEM plan.
- **Increase family engagement in STEM** through family engagement strategies such as family science nights.
- **Support and sustain STEM learning opportunities** through local partnerships, and consider Student Engagement, Implementation of the Common Core, and "Other Outcomes" related to STEM in expanded learning as part of Local Control Accountability Plans (LCAPs).

Access Resources to Support Expanded STEM Learning

Access resources to support STEM learning in expanded learning programs at **powerofdiscovery.org**.



CAN California AfterSchool Network
CONNECT. CONVENE. INSPIRE.

This publication was created by the NGSS Work Group of the CAN STEM Committee. Sign up for the CAN newsletter at **afterschoolnework.org** to learn more about expanded learning in California and STEM learning in expanded learning programs.

1. Pierce, K. M., Auger, A. and Vandell, D. L. (April, 2013). *Narrowing the Achievement Gap: Consistency and Intensity of Structured Activities During Elementary School.* Unpublished paper presented at the Society for Research in Child Development Biennial Meeting, Seattle, WA.
2. SRI International (2014) *Navigating the Future of After School Science: After School Science Networks Study Recommendations.* Retrieved January 2014 from http://www.sri.com/work/publications/asnrecommendations
3. Afterschool Alliance (2015) *Full STEM Ahead: Afterschool Programs Step Up as Key Partners in STEM Education.* Retrieved October 2015 from http://www.afterschoolalliance.org/AA3PM/