



Putting STEAM into Summer

A Guide to Regional Partners and
Resources in California

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The California School Boards Association envisions a state where public schools are widely recognized as the foundation of a free and democratic society, where local citizen governing boards are fully vested with the means to advance the best interests of students and the public, and where the futures of all children are driven by their aspirations, not bound by their circumstances.

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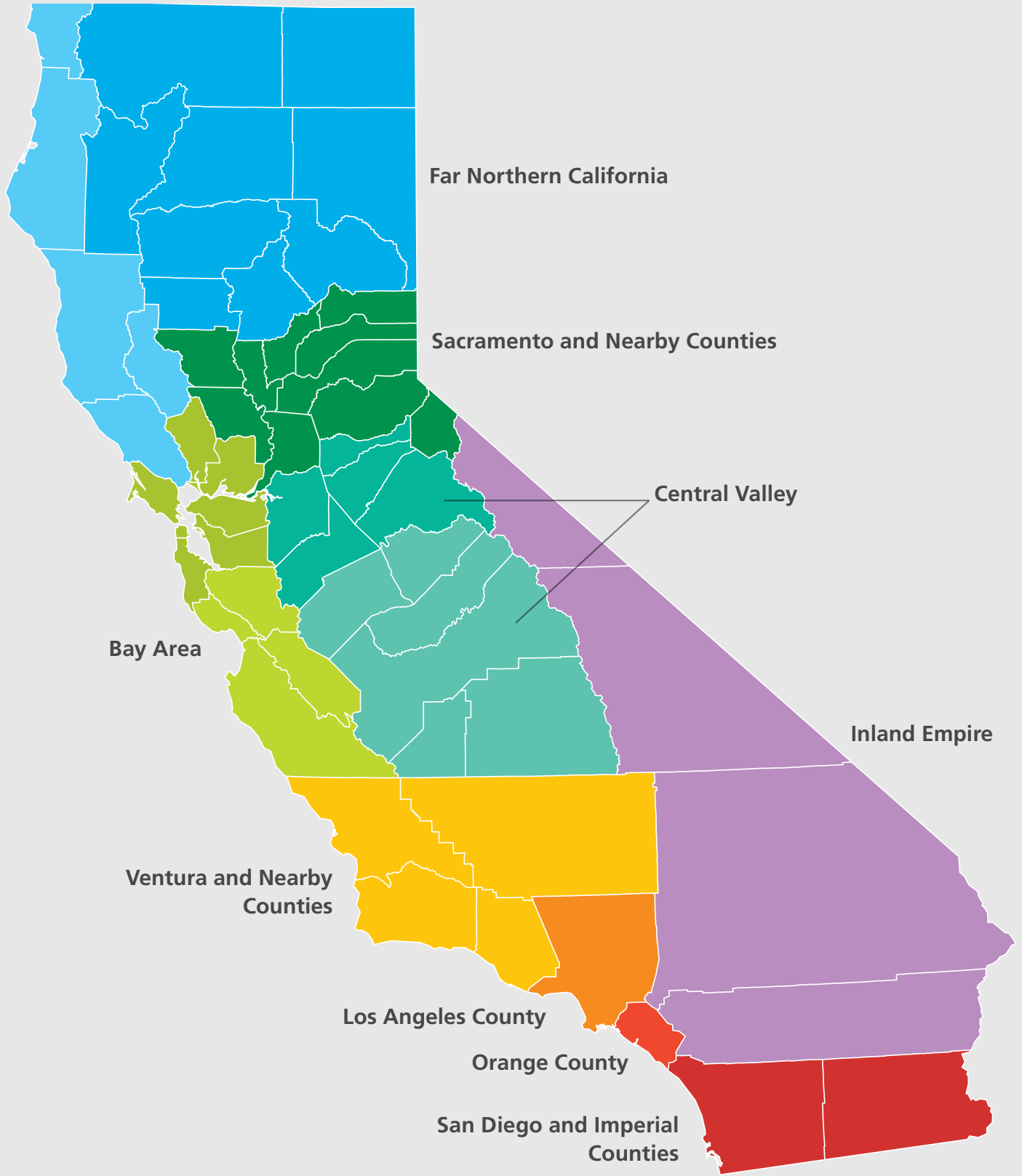


In regions throughout California one finds examples of how school districts—working with regional networks, community-based organizations, and experts in STEAM (science, technology, engineering, art, and math)—have created exciting summer learning programs for their students. These programs differ in structure and design in order to meet the needs of their communities and the students they serve.

When a school district is motivated to create a new summer learning program and ready to explore the possibilities, the most empowering next step is to talk to the people nearby who have already made it work and often to join an existing network or collective effort.

This guide was created to help officials in your district find the nearby expert to meet with, the program a few miles away to visit, the potential community partners to contact, or perhaps the county office of education that is already operating a network your district can join. The following information is subject to change. It is not meant as an exhaustive list but rather as a starting point to which you can add.

Region-specific versions of this guide are also available.



Far Northern California

Sacramento and Nearby Counties

Central Valley

Inland Empire

Bay Area

Ventura and Nearby Counties

Los Angeles County

Orange County

San Diego and Imperial Counties

Far Northern California

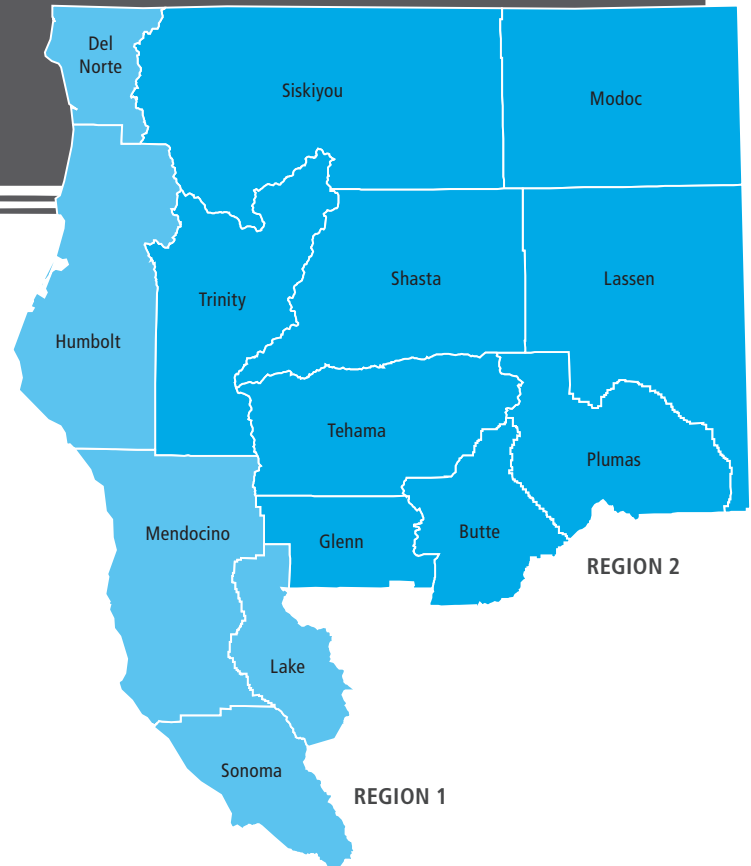
Where to Start in Far Northern California

In the predominantly rural counties of Northern California, county offices of education (COEs) often play a pivotal role in coordinating the partnerships between school districts, community-based organizations and STEAM experts that make summer learning programs successful. Their work during the school year coordinating and providing technical support for after-school programs can be a natural starting point. In addition, regional leadership has proven instrumental in attracting enough schools and students to summer learning to create the economies of scale that make the programs financially viable.

Regional Networks and Resources

The California Department of Education Expanded Learning Technical Assistance System divides far Northern California into two separate regions.

- » REGION 1 includes Del Norte, Humboldt, Lake, Mendocino, and Sonoma counties. The two regional leads work out of the Mendocino COE. For the Mendocino, Lake, Humboldt, and Del Norte County regional lead, contact Bessie Glossenger, 707-467-5152, Email: bglossenger@mcoe.us. For the Sonoma County regional lead, contact Melea Meyer, 707-467-5156, Email: mmeyer@mcoe.us.
- » REGION 2 includes Butte, Glenn, Lassen, Modoc, Plumas, Shasta, Siskiyou, Tehama, and Trinity counties. The lead for the region works at the Butte COE. Contact Gloria Halley, 530-532-5705 or 530-370-8620 (preferred), Email: ghalley@bcoe.org.



School District and County Office of Education Examples

Both the Glenn and Tehama County Offices of Education operate as the fiscal agents for ASES (after-school education and safety) grants and were able to use some of that funding for their summer learning programs in 2015. In neither case was the money sufficient to run the program. However, some school districts allocated a small portion of their Local Control Funding Formula (LCFF) funding to the program. Others provided valuable in-kind support by making their facilities available free of charge and providing some transportation.

Another crucial source of support in both counties was the federally funded Migrant Education Program. The program provided funds for summer meals and helped with transportation.

The programs also depended heavily on outside partnerships, including parks and recreation departments, other city agencies, community-based organizations, and local businesses. All of these organizations work with COE officials to provide the resources and activities essential to their programs' success.

The Butte County Office of Education serves as the coordinating agency and central point of contact for summer programs that serve local school districts in the greater Oroville area and outlying parts of Butte County. In 2016, Butte COE operated several STEAM-focused summer camps that were fee-based. Examples of summer camps offered were:

- » Minecraft Coding & Digital Editing Camp
- » Lego Robotics & 3D Design Camp
- » STEM Camp

Old Adobe Union School District, in Petaluma, offers a summer camp-style afternoon session to augment their more academic Summer Scholars program in the mornings. The afternoon adventure camp offers students in grades one to six a variety of activities, some of which have a STEM focus. Information is available at <https://oldadobe.org/summer-camp>.

Local Support Organization Examples

The Boys & Girls Club of the North Valley serves Chico, Paradise, and Hamilton City school districts, and includes a variety of technology and STEM activities in their programs.

Other organizations in Region 2 that work with school districts include 4-H Camps, the Chico Area Recreation Department, and the YMCA Summer Day Camps in Oroville and Redding.

In Sonoma County, a few organizations include STEAM activities in programs that operate in the summer, such as:

- » **The Sonoma County Children's Museum**, a relatively new STEAM resource in the region, brings workshops to schools and has regular classes and exhibits on a variety of topics throughout the year. Information is available at www.cmosc.org.
- » **The Boys and Girls Club of Central Sonoma County** also has summer programs with a STEM focus. Information is available at <http://bgccsc.org/summer/day-camp>.

Examples of Local STEM/STEAM Resources

Project WILD is a wildlife-based conservation and environmental education program that provides professional development training and educational materials. General information about this national program is available at www.projectwild.org and contact information for the program coordinators in California is available at <http://projectwild.org/CaliforniaCoordinator.htm>.

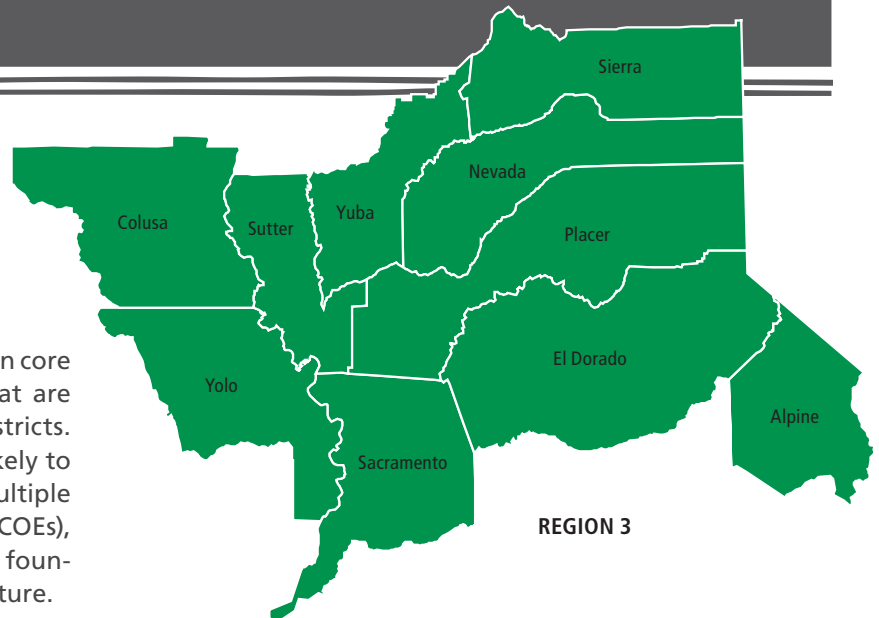
Project WET has both national and international networks focused on water education. It water resource education materials and workshop trainings for educators at all levels. The project website is at www.projectwet.org. In California, the project is coordinated by the Water Education Foundation and more information is available at www.watereducation.org/project-wet.

4-H has a long history of involvement with STEM subjects and activities. They can provide "train the trainer" workshops and also have extracurricular programs that vary by county. Their Workshops range from one called "Junk Drawer Robotics" to sessions on environmental topics and local resources. Information on their STEM and Agriculture programs is available at <https://4-h.org/parents/stem-agriculture>.

Sacramento and Nearby Counties

Where to Start in Sacramento and Nearby Counties

In Sacramento and nearby counties, the urban core has centralized resources and programs that are typically operated by individual school districts. In outlying areas, the programs are more likely to depend on creative partnerships among multiple districts and county offices of education (COEs), and often tap into local industry groups and foundations with a specific focus, such as agriculture.



Regional Networks and Resources

The Sacramento County Office of Education (SCOE) houses the regional lead appointed by the California Department of Education to support program implementation and build capacity for quality expanded learning programs (i.e. before, after, inter-session, and summer school) throughout Region 3 of the State's Expanded Learning Technical Assistance System. In addition to Sacramento, that includes Alpine, Colusa, El Dorado, Nevada, Placer, Sierra, Sutter, Yolo, and Yuba counties. Staff at the SCOE also help make connections between school districts and local organizations based on local needs and circumstances.

Contact Monica Gonzalez-Williams, 916-228-2644, Email: mgonzalez@scoe.net and Mark Drewes, 916-228-2518, Email: mdrewes@scoe.net.

School District Examples

Sacramento City Unified School District served about 4,000 students in its summer learning programs in 2016. The district contracts with several different program providers who hire staff and implement the program. These are typically, but not always, the same organizations that provide after-school programs at the sites. Two credentialed teachers are included in the staff of each program. The district has also used the summer learning programs to give teachers an opportunity to develop and pilot new lessons. The district's expanded learning office provides centralized support—from coordinating field trips to conducting program evaluations. A variety of STEAM topics and activities are integrated into the day.

Elk Grove Unified School District has added an enrichment piece to its traditional summer school model. Staff use resources from the STEM Learning Library at the SCOE Expanded Learning Office to engage K-8 students in hands-on STEM learning activities during the enrichment portion of the summer program.

Folsom Cordova Unified School District has created a Growing Together: STEM and Family Literacy Day Camp. In 2016, the theme was water. Students and parents alike learned about the importance of water and water conservation from local experts, took a field trip to SCOE's Outdoor Educational Day Site (River Bend Park), and participated in water-related STEM activities at their summer camp site.

Wheatland School District has added various STEM components to their summer learning programs, such as providing students with various materials and space to engineer their very own Cain's Arcade. If the students could imagine it, they could engineer it. Students used the engineering design process to create prototypes and final designs of their arcade games. Students were also engaged in a Farm-to-Fork pilot program with Bishop's Farm where they learned about soil, crops, and farm careers.

Local Support Organization Examples

The **Yolo County Office of Education** (YCOE) is adaptable in its approach to summer STEAM programming. It looks for partners with ideas, existing programs, and resources that can help create valuable programs for students in this rural area.

The YCOE offers a variety of different summer learning programs. School districts, post-secondary institutions, and industry organizations all combine their efforts to design the curriculum, staff the programs, and recruit the students. To date, much of the focus has been on high school students and giving them opportunities to learn while doing through internships and other hands-on experiences. One such program is Project SOLAR—Sustaining Our Local Alternative Energy Resources—an initiative that involves the County of Yolo and solar system supplier SunPower.

A **Regional STEM Learning Ecosystem** works in partnership with the SCOE Expanded Learning Office to connect summer program providers to local STEM experts. In Sacramento County alone, 169 after-school and summer program sites have STEM activities taking place. A blog provides the latest news at <http://afterschoolregion3.blogspot.com>.

Examples of Local STEM/STEAM Resources

Explorit is a nonprofit located in Davis that provides opportunities for hands-on science exploration through mobile and on-site programs that connect science to everyday life. A list of the kinds of programs they offer is available at www.explorit.org/about.

Project WILD is a wildlife-based conservation and environmental education program that provides professional development training and educational materials. General information about this national program is available at www.projectwild.org and contact information for the program coordinators in California is available at <http://projectwild.org/CaliforniaCoordinator.htm>.

Project WET has both national and international networks focused on water education. It provides water resource education materials and workshop trainings for educators at all levels. The project website is at www.projectwet.org. In California, the project is coordinated by the Water Education Foundation and more information is available at www.watereducation.org/project-wet.

UC Davis actively supports and or sponsors STEAM learning activities for children and youth, working in partnership with the YCOE among others.

The Center for Land-Based Learning, headquartered in Winters, is dedicated to teaching California's youth about the importance of agriculture and natural resource conservation. Their list of partners includes school districts and schools throughout the agricultural areas of California.

Other STEAM-oriented program providers in the region include:

- » **Effie Yeaw Nature Center** at www.sacnaturecenter.net/home.html
- » **Powerhouse Science Center** at <http://powerhousesc.org>
- » **Aerospace Museum of California** at <https://aerospaceca.org>
- » **Crocker Art Museum** at www.crockerart.org
- » **Food Literacy Center** at www.foodliteracycenter.org

Bay Area



Where to Start in the Bay Area

The greater Bay Area is a study in contrasts, ranging from the rural areas of San Benito and Sonoma counties to the freeways and urban challenges of San Jose, Oakland, and San Francisco. The region has more than its share of small school districts, making partnerships challenging. At the same time it is rich in STEAM expertise and powerful organizations, particularly given the prominence of its technology industry and higher education institutions.

Regional Networks and Resources

The state's Expanded Learning Technical Assistance System divides the Bay Area into two separate regions for purposes of technical assistance. Given the region's robust technology economy, its leaders have also played instrumental roles in the Power of Discovery initiative, which supports STEAM learning in expanded learning programs.

- » REGION 4 includes Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, and Solano counties. The regional leads work at the Alameda County Office of Education. Contact Joe Hudson, 510-670-7732, Email: jhudson@acoe.org and Nora Zamora, 510-670-4541, Email: nzamora@acoe.org.
- » REGION 5 includes Monterey, Santa Clara, Santa Cruz, and San Benito counties. The lead for the region works at the Monterey County Office of Education. Contact Mara Wold, Email: mwold@monterey.k12.ca.us.

School District Examples

Oakland Unified School District uses a number of different contractors to provide its school-year and summer programs. The district provided professional development and coaching to the program staff as part of a science learning pilot it started in 2013.

Gilroy Unified School District blended academics and enrichment in its 2016 Super Power Summer Camp for elementary and middle school students.

Local Support Organization Examples

The YMCA of Silicon Valley works with multiple school districts, as is typical of many community-based organizations. They operate both after-school and summer programs at school sites in many different districts in this diverse and highly populated region.

The YMCA often acts as a connector between the districts and schools where they run programs and various local organizations that can provide activities, experts, and curricula in different areas of STEM. These range from NASA Ames Research Center to the Tech Museum of Innovation. Often these organizations are eager to share their knowledge and resources with local schools and, with so many districts in the region, find it helpful to work with a community organization that already has school district partners.

The Sunset Neighborhood Beacon Center (SNBC) offers numerous high quality, free programs to elementary, middle, and high school students, as well as adults, on San Francisco's west side.

SNBC is a program of **Bay Area Community Resources**, a regional nonprofit that provides a range of services in seven counties around the San Francisco Bay Area.

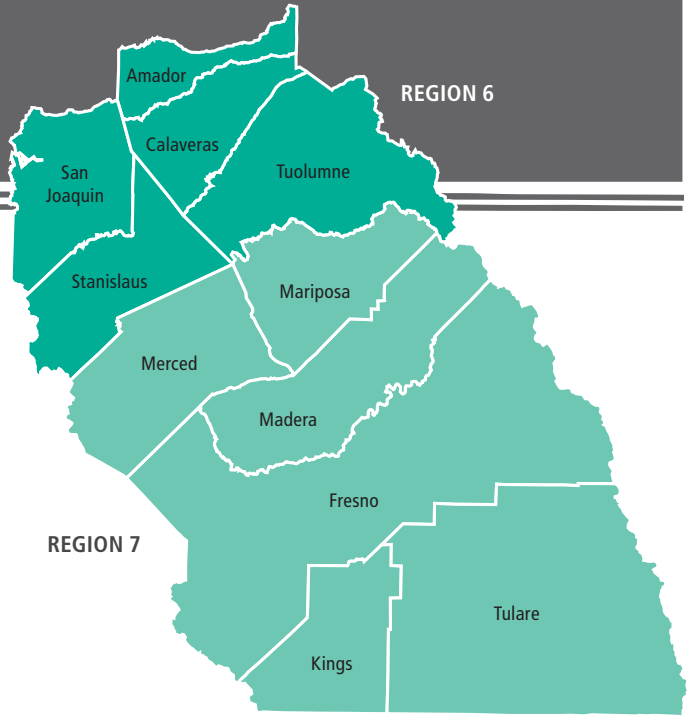
Examples of Local STEM/STEAM Resources

The California Academy of Sciences sponsors Science Action Club, which works through after-school providers and is targeted to middle school youth.

The University of California, Berkeley's Lawrence Hall of Science is the country's only science center that is part of a top-tier, public research university. The Hall partners with world-class scientists, engineers, educational leaders, and teachers.

The Tech Museum of Innovation works with local school districts to provide field trips, special programs, curriculum, and professional development.

Central Valley



Where to Start in the Central Valley

In the geographically large Central Valley, with its mix of urban and rural communities, county offices of education (COEs) play an important role in connecting school districts, community organizations, post-secondary institutions, and funders.

Regional Networks and Resources

The state's Expanded Learning Technical Assistance System divides the Central Valley into two technical assistance regions, supported by regional leads that work with the California Department of Education.

- » REGION 6 includes Amador, Calaveras, San Joaquin, Stanislaus, and Tuolumne counties. The lead for the region works at the Stanislaus COE. Contact Danielle Jones, 209-238-1365, Email: djones@stancoe.org.
- » REGION 7 includes Fresno, Kings, Madera, Merced, and Tulare counties. There are leads in each county. Contact information is available at www.tcoe.org/AfterSchool/index.shtm.

Examples of School District and County Office of Education Examples

The Fresno County Office of Education serves as fiscal agent for the majority of after-school and summer learning programs in the county. They manage several summer programs in cooperation with the California Teaching Fellows Foundation.

The Fresno COE provides the instructional guidance for the district programs, including the curriculum structure plus classes taught by county personnel on STEAM topics that have included fitness and nutrition. Some of the school districts that have operated these programs include:

- » Central Unified School District
- » Fowler Unified School District
- » Kerman Unified School District
- » Parlier Unified School District
- » Firebaugh Unified School District

The Stanislaus and San Joaquin County Offices of Education serve as the lead agencies for their respective areas through their Project SAFE and GRASPIT Consortium partnerships. These COEs—in cooperation with local school districts and community-based organizations—support STEM and summer learning programs in the two counties.

Local Support Organization Examples

California Teaching Fellows Foundation is a local nonprofit organization that hires and provides professional development to more than 1,200 local college students (most from CSU Fresno) who work in more than 200 after-school and summer programs throughout Fresno and Madera counties.

Project SAFE operates STEM and summer learning programs in Waterford Unified School District, at Moon Elementary School, Lucille Whitehead Intermediate School, and Waterford Junior High School. For information, contact Michael Nicholson, mnicholson@stancoe.org.

GRASPIT Consortium schools in the Tracy Unified School District work with the Boys and Girls Club of Tracy to provide STEM and summer learning programs at five elementary schools, a K-8 school, and a middle school in the district. For information, contact Nora Hana, nhana@sjcoe.net.

Examples of Local STEM/STEAM Resources

The Center for Land-Based Learning, headquartered in Winters, is dedicated to teaching California's youth about the importance of agriculture and natural resource conservation. Their list of partners includes school districts and schools throughout the agricultural areas of California.

Project WILD is a wildlife-based conservation and environmental education program that provides professional development training and educational materials. General information about this national program is available at www.projectwild.org and contact information for the program coordinators in California is available at <http://projectwild.org/CaliforniaCoordinator.htm>.

Project WET has both national and international networks focused on water education. It provides water resource education materials and workshop trainings for educators at all levels. The project website is at www.projectwet.org. In California the project is coordinated by the Water Education Foundation. More information is available at www.watereducation.org/project-wet.

North Central Valley STEM Center is a regional collaborative partnership between area leaders in education, industry, and businesses from throughout the Northern Central Valley and beyond. The Center's mission is to help the region prepare the nation's most STEM-capable graduates. Information is available at www.sjcoescience.org/north-central-valley-stem-center.html.

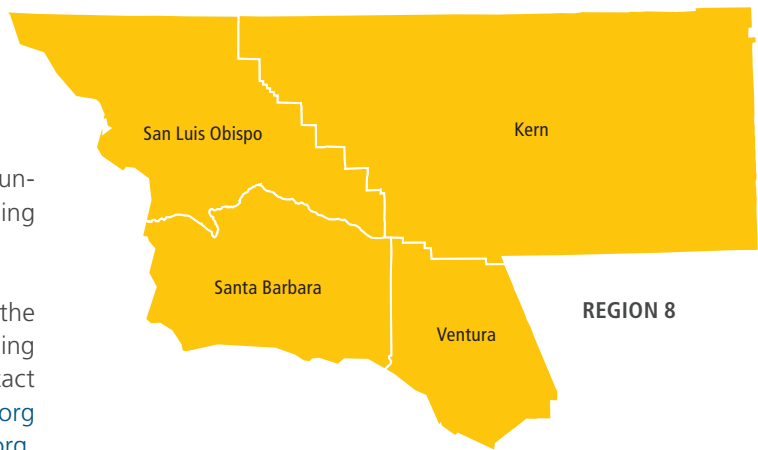
SAM (Science, Art, and Music) Academy in Sanger is a non-profit organization that offers unique programming and high-quality instruction for children and communities throughout the Central San Joaquin Valley. Their community-based programs provide accessible, equitable, and engaging ways for youth to explore STEAM. Information is available at www.cvsamacademy.org.

Ventura and Nearby Counties

Where to Start in Ventura and Nearby Counties

Ventura, Santa Barbara, San Luis Obispo, and Kern counties are part of Region 8 of the state's Expanded Learning Technical Assistance System.

The Ventura County Office of Education acts as the regional lead for expanded learning programs, including after-school and summer learning programming. Contact Amy Cranston, 805-437-1376, Email: acranston@vcoe.org or Ernesto Duran, 805-437-1390, Email: eduran@vcoe.org.



Local Support Organization Examples

Fun in the Sun is a six-week summer learning program provided by United Way of Santa Barbara County. The program is targeted to academically and financially at-risk children, and provides them with hands-on, project-based lessons. It also partners with over 70 local public and private organizations. More information is available at <http://www.unitedwaysb.org/fun-sun-0>.

VC STEM is a STEM EcoSystem Initiative coordinated by the Ventura County P-20 Council and led by CSU Channel Islands. It has created an action group that is looking into how, where, and when students can be provided with more high-quality STEM opportunities during “out of school” time, including summer. Contact information and more about VC STEM is available at www.vcstem.org.

School districts in the region that are partners in VC STEM include:

- » Oxnard Elementary School District
- » Oxnard Union High School District
- » Santa Paula Unified School District

A full list of partners in the initiative is available at www.vcstem.org/partners.

Orange County

Where to Start in Orange County

In Orange County there is a vigorous effort to provide informal STEAM learning opportunities. For school districts, the Orange County Office of Education can act as a central clearing house for learning about community partners and what local districts are doing to create strong summer programs.



Regional Networks and Resources

Orange County is part of Region 9 of the state's Expanded Learning Technical Assistance System.

The Orange County Office of Education houses the local lead appointed by the California Department of Education to support program implementation and build regional capacity for effective after-school and summer programs. Contact: Jeanne Awrey, 714-966-4093, Email: jawrey@ocde.us.

School District Examples

Two local districts with a STEM focus during the regular school-year created summer programs that were aligned with that focus. In the process the districts worked with various local STEM partners.

Ocean View School District offered its students three different summer camp options in the summer of 2016, all of which were fee-based. Two of the programs operated for 10 weeks and offered full day care. Pricing depended on whether or not students participated in field trip opportunities. Neither of these programs was explicitly STEM focused, but both offered a strong component of science instruction.

The third program was a five-week STEAM summer camp program that was new in 2016. For this program, the district worked with Discovery Cube in Orange County and a variety of other local partners to provide students with activities as well as high-quality instruction based on a different theme each week. The grade levels served in the program were from TK to 5th grade.

At all of the camps, the district established learning objectives for students each week. For example, during the space week, the objectives included being able to identify the difference between planets, meteors, and stars.

At Ocean View, summer and after-school programs are operated by the school district itself and the staff are district employees. The school year staff compete to be able to lead the summer programs.

Orange Unified School District runs a similar summer program using district staff. They spent a year developing a STEAM curriculum for use during summer. Providing professional development to their non-credentialed staff during the school year helped prepare them to facilitate activities that involved inquiry and project-based learning.

Other Orange County districts with summer programs that incorporate STEAM include:

- » Anaheim Union High School District
- » Magnolia School District
- » Anaheim Elementary School District

Local Support Organization Examples

The Orange County STEM Initiative serves as a key connection point for STEAM initiatives in the area. Districts interested in knowing more about local programs and partnership opportunities in the county can start with this nonprofit organization. Its goal is to create effective partnerships between community stakeholders, including but not limited to families, education, business, government, and philanthropy. Their website is at www.ocstem.org.

Imagine Science is a partnership among the Boys & Girls Clubs of Garden Grove, Girls Inc. of Orange County, the Orange County 4-H Council, and the Anaheim Family YMCA. The partnership engages youth in Orange County with STEM learning activities. More information about the partnership is available at www.imaginesci.org.

The Anaheim Family YMCA has multiple STEM programs, including a partnership with CSU Fullerton. For information about their summer STEM programs go to www.anaheimymca.org.

Examples of Local STEM/STEAM Resources

Partners of the OC Stem Initiative include a large group of philanthropic, post-secondary, industry, and education partners. The Initiative has members such as the Tiger Woods Foundation, Kaiser Permanente, and the Children and Families Commission of Orange County. The full list is at www.ocstem.org/members.

Science@OC works with schools and districts in Orange County to improve science education, with a particular focus on middle school students. It is a fiscally sponsored project of OneOC, a local nonprofit. Events and descriptions of their work are at www.scienceoc.org.

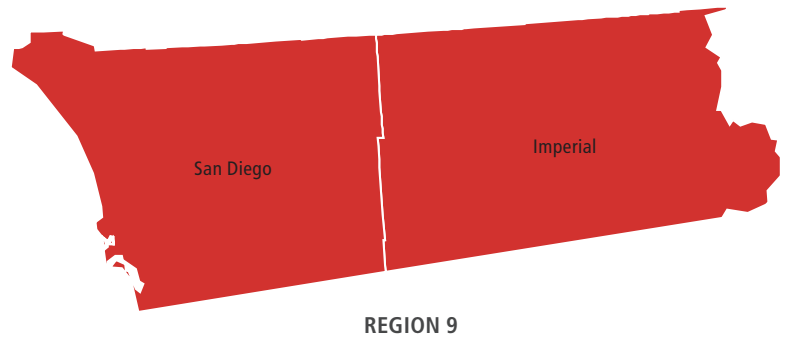
Discovery Cube has a variety of education initiatives that involve both having school groups visit them on site, and sharing their STEM expertise with educators. Information is available at www.discoverycube.org/oc.

The Education Office at NASA's Jet Propulsion Laboratory (JPL) taps into the knowledge base at NASA to provide educators in both formal and informal settings with STEM-based lessons, projects, activities, resources, and professional development. JPL serves Los Angeles, Riverside, San Bernardino, Orange, and San Diego counties. A summary of what they can provide is found at www.nasa.gov/centers/jpl/education/index.html.

San Diego and Imperial Counties

Where to Start in San Diego and Imperial Counties

In California's two southern-most counties, the county offices of education (COEs) are the first stops for finding out about summer learning programs with a STEAM focus. In heavily populated San Diego County, universities and other local organizations have put a particular focus on science and STEM in informal settings.



Regional Networks and Resources

San Diego and Imperial counties are part of Region 9 of the state's Expanded Learning Technical Assistance System, and each houses a local lead appointed by the California Department of Education.

- » For the Imperial COE lead, contact Brenda San Ramon, 760-312-6538, Email: bcs44@icoe.org.
- » For the San Diego COE (SDCOE) lead, contact Liza Flowers, 858-569-3140, Email: liza.flowers@sdcoe.net.

The SDCOE also is the home for two STEAM specific efforts, the Power of Discovery: STEM Hub Initiative and the San Diego STEM EcoSystem Initiative.

School District and County Office of Education Examples

Many school districts in San Diego County have expanded learning time staff who have participated in targeted professional development provided by the SDCOE. The SDCOE supports a community of practice dedicated to increasing the quantity and quality of STEAM learning in after-school and summer programs. That work began in 2012 and has included both annual events and regular professional development sessions.

In 2015-16, the focus of those monthly gatherings was the creation of nearly a year's worth of STEM units that the participating teams shared and took back to their programs. The sessions combine content and pedagogy, so participants learn how to set up inquiries and ask good questions, but also get the science and math understanding that underpins the units they create. The goal is to increase both the confidence and competence of program staff so they can deliver fun and rigorous STEAM experiences to their students. In recruiting participants for this program, the SDCOE first targets programs that operate both after school and during the summer.

In San Diego County, school districts that have both summer programs and have regularly participated in the Power of Discovery: STEM Hub Initiative include:

- » Santee School District
- » Escondido Union School District
- » South Bay Union School District
- » Oceanside Unified School District
- » National School District
- » Chula Vista Elementary School District

In **Imperial County**, Holtville Unified, and Westmorland Union School District both run summer learning programs with a STEM focus.

Local Support Organization Examples

In both Imperial and San Diego Counties, the **YMCA and Boys and Girls Clubs** often partner with school districts to offer both after-school and summer programs.

In the San Diego area in particular, some of these community-based organizations play the role of connectors, helping develop partnerships between their local school districts and STEAM experts. Examples include:

- » **Boys & Girls Clubs of Oceanside**, which partners with Oceanside Unified School District, corporations such as Genetech, Cox Communications, and San Diego Gas and Electric, and organizations such as Sally Ride Science at UC San Diego.
- » **The South Bay Family YMCA** partners with National and Chula Vista Elementary School Districts, along with organizations like the San Diego Zoo and San Diego Gas and Electric.

Examples of Local STEM/STEAM Resources

In Imperial County, a number of organizations work with school districts on STEM-focused programs. Examples include:

- » **The Imperial Irrigation District** (IID) offers a speakers bureau and other education programs.
- » **CAL FRESH** offers presentations on physical activity, healthy eating, and the creation of Cal Fresh youth clubs.
- » **The Calexico High School ASSETS** program partners with UC Irvine and San Diego State University.

The SDCOE maintains an online directory of local organizations that offer programs such as assemblies, field trips, professional development, on-site opportunities, and curriculum related to STEAM education. Information and the directory can be found at <https://steam.sdcoe.net>.

The Education Office at NASA's Jet Propulsion Laboratory (JPL) taps into the knowledge base at NASA to provide educators in both formal and informal settings with STEM-based lessons, projects, activities, resources, and professional development. JPL serves Los Angeles, Riverside, San Bernardino, Orange, and San Diego counties. A summary of what they can provide is found at www.nasa.gov/centers/jpl/education/index.html.

STEM Next, which operates out of the University of San Diego, is a national leader in increasing opportunities in STEM learning for youth both in and out of school. Their work includes identifying and supporting cross-sector collaborations. For more information about what they do, and contacts in the informal STEM field, visit <https://stemnext.org/about-stem-next>.

Inland Empire

Where to Start in the Inland Empire

Mono, Inyo, San Bernardino, and Riverside counties are part of Region 10 of the state's Expanded Learning Technical Assistance System. Technical assistance and support for summer program implementation is available from both the Riverside and San Bernardino County Offices of Education (COEs). The local leads are appointed and work with the California Department of Education.

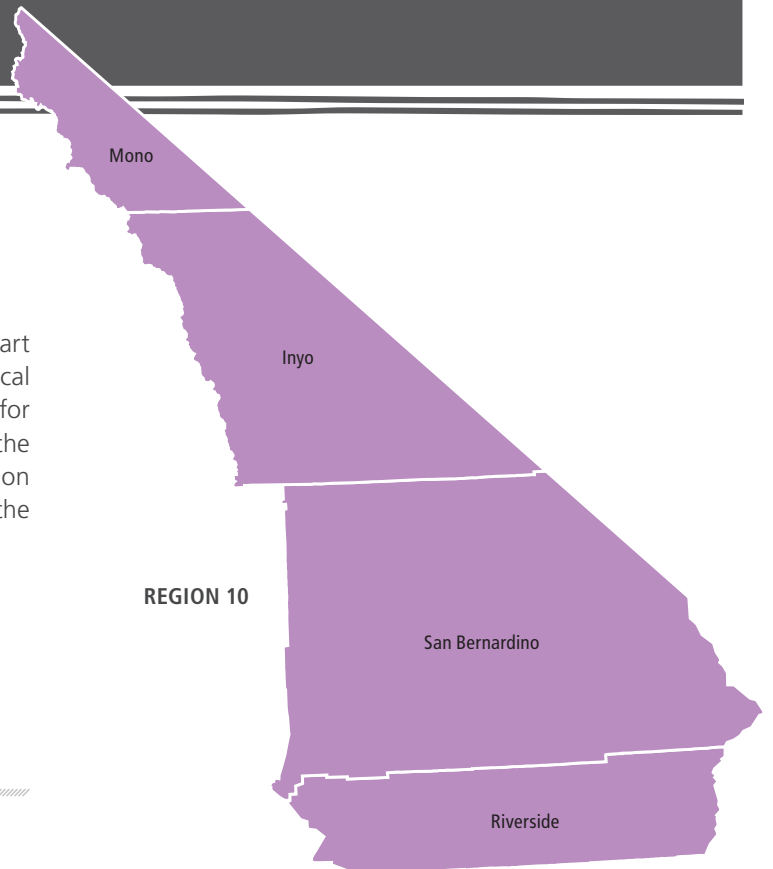
- » **Riverside COE** Allison Haynes, 951-826-6246, Email: ahaynes@rcoe.us
- » **San Bernardino COE** John Duran, 909-386-2949, Email: john_duran@sbcss.k12.ca.us

School District Examples

The San Bernardino City Unified School District operates a variety of summer enrichment programs. In the summer of 2016, one specifically served elementary students “in non-traditional living arrangements.” The free program included a STEM curriculum.

Local Support Organization Examples

THINK Together provides both after-school and summer program services to school districts in Riverside and San Bernardino counties. More information about their regional programs and clients is available at <https://thinktogether.org/locations/riversidecounty> and at <https://thinktogether.org/locations/sanbernardino>.



Examples of Local STEM/STEAM Resources

The Education Office at NASA's Jet Propulsion Laboratory (JPL) taps into the knowledge base at NASA to provide educators in both formal and informal settings with STEM-based lessons, projects, activities, resources, and professional development. JPL serves Los Angeles, Riverside, San Bernardino, Orange, and San Diego counties. A summary of what they can provide is found at www.nasa.gov/centers/jpl/education/index.html.

Los Angeles County

Where to Start in Los Angeles County

In the greater Los Angeles area, summer learning programs have been operating for several years, including a major initiative that involved the Los Angeles Unified School District and LA's Best. Importantly, many smaller districts have developed their own approaches to these programs as well, with support from the Los Angeles County Office of Education (COE). The COE provides technical support and training for expanded learning programs and can act as an important connection point for districts looking for more information about program quality and STEAM in summer.

Regional Networks and Resources

The Los Angeles COE has taken a leadership role in supporting summer learning programs. It also houses the technical assistance group appointed by the California Department of Education to support program implementation and build regional capacity for effective expanded learning and summer programs. Contact Mary Jo Ginty, 562-803-8336, Email: Ginty_MaryJo@lacoed.edu.

School District Examples

Several districts developed and continue to offer summer learning programs that reflect their communities and varied approaches to expanded learning. They include:



- » **Los Angeles Unified School District (LAUSD)** offers summer learning programs in partnership with expanded learning program provider LA's Best. This community-based organization staffs and manages the programs, which include STEM topics as part of an overall program day. In addition, the Beyond the Bell office at LAUSD operates additional summer programs, including for high school students.
- » **Whittier City School District** manages and staffs its own summer programs which employ a combination of teachers and expanded learning staff and operate in both elementary and middle schools.
- » **Mountain View Elementary School District** works with program provider THINK Together to operate a summer learning program that also provides professional development opportunities for classroom teachers.

Other Districts within Los Angeles County

- » **Pasadena Unified School District**, the Pasadena Educational Foundation, and the City of Pasadena all offer summer learning programs.
- » **Azusa Unified School District** began working with nearby Azusa Pacific University in 2015 to develop summer STEM programs for elementary and middle grade students.

Local Support Organization Examples

THINK Together provides both expanded learning and summer program services to school districts in southeast Los Angeles County. More about their regional programs and clients is available at <https://thinktogether.org/locations/los-angeles>.

LA's Best has operated its Celebrate Science Program since 1991 based on a specific learning framework for elementary age students. Today, Celebrate Science encompasses all the STEM subject areas and provides “fun, engaging, interactive science experiences under a ‘team inquiry’ model.” LA's Best has created connections with many community partners and curriculum providers in the process of developing its STEM activities and training its staff members.

Examples of Local STEM/STEAM Resources

The Los Angeles Regional STEM Hub was created to bring together the public, private, nonprofit, and academic sectors to develop the region's capacity around STEM education. The effort, organized by the Los Angeles Area Chamber of Commerce Foundation, included a work group specifically devoted to STEM in “out-of-school time” that developed a framework and action plan in 2014. The main website for the STEM Hub is www.unitela.com/lastemhub.

The Education Office at NASA's Jet Propulsion Lab (JPL) taps into the knowledge base at NASA to provide educators in both formal and informal settings with STEM-based lessons, projects, activities, resources, and professional development. JPL serves Los Angeles, Riverside, San Bernardino, Orange, and San Diego counties. A summary of what they can provide is found at www.nasa.gov/centers/jpl/education/index.html.

The California Science Center operates Community Youth Programs that work with local schools and are focused on middle school and high school students. More information is at www.californiasciencecenter.org.

DIY Girls offers after-school and summer programs that provide hands-on STEAM experiences for girls in 4th-12th grade. More information is at www.diygirls.org.

Online Resources

A wealth of activity ideas and lesson plans are freely available online. In addition, several organizations provide online support for staff development.

Online Resources – STEAM Materials and Activities

- Power of Discovery Resources:
http://powerofdiscovery.org/curriculum_activity
- STEMworks:
<http://changetheequation.org/stemworks>

Online Resources – Professional Supports

- Click2Science:
www.click2sciencepd.org
- The PEAR Institute:
www.pearweb.org/tools/STEM.html
- Summer Matters: www.summermatters.net

Additional Resources from CSBA

- The Summer Learning section of the CSBA website:
[change to www.csba.org/summerlearning](http://www.csba.org/summerlearning)

The screenshot shows the CSBA (California School Boards Association) website. The top navigation bar includes links for about, advocacy, training & events, products & services, governance & policy resources, newroom, and my csba. The main content area is titled "Governance and Policy Resources" with the subtitle "Research, guidance and services for effective school board governance". A left sidebar lists various categories such as Research & Policy Briefs, District Policy Services, Effective Governance, Student Achievement, Accountability, Assessment, College and Career Readiness, Common Core, Curriculum, English Learners, Low-Income Youth, Expanded Learning Opportunities, Preschool, Summer Learning, Teaching, Conditions of Children, and Fair Funding. The "Summer Learning" section is highlighted and contains the following text: "Creative activities over the summer can help students retain more of what they learn in school. Governance teams can use these resources about summer learning and wellness when planning for effective summer programs, which are so crucial to closing the achievement gap." Below this text is a "Related Links" box with a graphic titled "SUMMER MATTERS" showing silhouettes of people. The links include: "Summer Learning Resource Guide (1/16)", "Summer Learning Timeline: A three-stage planning guide for boards developing summer learning programs.", "See the Individual issues in the Summer Learning Series:", "Issue 1: Why do summer learning and wellness programs matter? (4/13)", "Issue 2: What constitutes an effective summer program? (5/13)", "Issue 3: How can boards provide leadership and funding for summer programs? (5/13)", "Issue 4: Effective Summer Learning Programs: Case Studies (8/13)", "Policy briefs and fact sheets", "Supporting the Summer Learning Strategy to Boost Student Achievement Fact Sheet (12/15)", "The Summer Solution to Closing the Gap - Legislative Fact Sheet (8/14)", "Summer Learning Programs: Implications of the LCFF Fact Sheet (3/14)", "Summer learning survey examines district practices, plans and perceptions (2/14)", "School's Out, Now What?: How summer programs are improving student learning and wellness (4/13)", and "Sample policies", "BP 6177 Summer Learning Programs", and "BP 3552 Summer Meal Program".

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