California Department of Education

Executive Office

SBE-002 (REV. 11/2017)

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# MEMORANDUM

**DATE:** February 2, 2018

**TO:** MEMBERS, State Board of Education

**FROM:** TOM TORLAKSON, State Superintendent of Public Instruction

**SUBJECT:** Update on the Activities of the California Department of Education and State Board of Education Regarding Implementation of California Next Generation Science Standards

## Summary of Key Issues

California *Education Code* (*EC*) Section 60605.85(a) required the State Superintendent of Public Instruction (SSPI) to submit a set of revised *Science Content Standards for California Public Schools, Kindergarten through Grade Twelve* to the State Board of Education (SBE) by July 31, 2013, and the SBE’s adoption, rejection, or modification of those standards by November 30, 2013. The revised science standards for California are based upon the nationally developed Next Generation Science Standards, and were adopted by the SBE on September 4, 2013, with action on the middle school Integrated Learning Progression model adopted in November 2013. The California Next Generation Science Standards (CA NGSS), as well as additional information, are available on the CDE Web page at [http://www.cde.ca.gov/pd/ca/sc/CA NGSSintrod.asp](http://www.cde.ca.gov/pd/ca/sc/ngssintrod.asp).

As required by *EC* Section 60605.85(b), the SSPI presented a schedule and implementation plan for integrating the science content standards into the state educational system. These were adopted by the SBE in November 2014. Information regarding the “Next Generation Science Standards Systems Implementation Plan for California” can be found on the CDE Web page at <http://www.cde.ca.gov/pd/ca/sc/documents/sciimpplan120214.pdf>.

The eight strategies described in the CA NGSS Systems Implementation Plan are:

1. Facilitate high-quality professional learning opportunities for educators to ensure that every student has access to teachers who are prepared to teach and facilitate student learning to the levels of rigor and depth required by the CA NGSS;
2. Provide CA NGSS-aligned instructional resources designed to meet the diverse needs of all students; Develop and transition to CA NGSS-aligned assessments that support the improvement of teaching and learning and provide information that may be used for accountability;
3. Collaborate with parents, guardians, and the early childhood and expanded learning communities to integrate the CA NGSS into programs and activities beyond the Kindergarten through grade twelve school setting;
4. Collaborate with the postsecondary and business communities and additional stakeholders to ensure that all students are prepared for success in career and college;
5. Seek, create, and disseminate resources to support stakeholders as the   
   CA NGSS systems implementation moves forward;
6. Design and establish systems of effective communication regarding CA NGSS among stakeholders to continuously identify areas of need and disseminate information; and
7. Build coalitions to ensure a consistent message and to sustain momentum during implementation.

The CDE is working with the SBE, the California County Superintendents Educational Service Association, the California Science Teachers Association, the California Science Project, and the K–12 Alliance at WestEd, and local educational agencies to implement the CA NGSS Systems Implementation Plan. An update regarding these activities is provided in Attachment 1.

## Summary of Previous State Board Discussion

This is the fifth in a series of State Board of Education (SBE) Information Memoranda to inform the SBE and the public regarding the CA NGSS implementation activities. Previous SBE updates can be found on the CDE Web page at

* Update on the Activities of the California Department of Education and State Board of Education Regarding Implementation of California Next Generation Science Standards: <https://www.cde.ca.gov/be/pn/im/documents/memo-tlsb-plsd-aug17item01.doc> (DOC; Posted 11-Sep-2017)
* Update on the Activities of the California Department of Education and State Board of Education Regarding Implementation of California Next Generation Science Standards: <https://www.cde.ca.gov/be/pn/im/documents/memo-ilsb-plsd-june16item01.doc> (DOC; Posted 17-Jun-2016)
* California Next Generation Science Standards Implementation Plan Progress Update: <https://www.cde.ca.gov/be/pn/im/documents/memo-ilsb-plsd-aug15item01.doc> (DOC; Posted 13-Aug-2015)
* Item 07 Attachment 1 Subject: State Implementation Plan for California Next Generation Science Standards for Public Schools, Kindergarten through Grade Twelve, November 2014 Revision: <https://www.cde.ca.gov/be/ag/ag/yr14/documents/nov14item07a1.doc> (DOC; 8MB)

## Attachment(s)

* **Attachment 1:** California Next Generation Science Standards Systems Implementation Plan Highlights: June–December 2017 (35 pages)

# Attachment 1: California Next Generation Science Standards

## Systems Implementation Plan Highlights June–December 2017

1. **Facilitate high-quality professional learning opportunities for educators**

To ensure that every student has access to teachers who are prepared to teach and facilitate student learning to the levels of rigor and depth required by the California Next Generation Science Standards (CA NGSS).

* The California Department of Education (CDE) has partnered with the California County Superintendents Educational Service Association (CCSESA), the California Science Teachers’ Association (CSTA), the California County Offices of Education (COE), the California Science Project (CSP), and the K–12 Alliance at WestEd to implement the CA NGSS Rollout Symposia. These statewide, two-day workshops cover a variety of topics for administrators and teacher leaders who wish to learn more about the CA NGSS and the California Science Framework (CA Science Framework).

| **Organization (LEA/COE/District)** | **Activity** | **Date** | **Target Population (teachers/students/parents)** | **Number Attended** | **Topics** |
| --- | --- | --- | --- | --- | --- |
| Los Angeles COE | Phase IV Rollout | June 7–8, 2017 | Teacher, Administrators, Publishers, and PDP | 398 | CA Science Framework |
| San Bernardino/ Riverside COEs | Phase IV Rollout | August 22–23, 2017 | Teacher, Administrators, Publishers, and PDP | 277 | CA Science Framework |
| Alameda COE | Phase IV Rollout | September  12–13, 2017 | Teacher, Administrators, Publishers, and PDP | 290 | CA Science Framework |
| San Diego COE | Phase IV Rollout | November 7–8, 2017 | Teacher, Administrators, Publishers, and PDP | 235 | CA Science Framework |
| Fresno COE | Phase IV Rollout | November 9–10, 2017 | Teacher, Administrators, Publishers, and PDP | 195 | CA Science Framework |
| Siskiyou COE | Phase IV Rollout | November  14–15, 2017 | Teacher, Administrators, Publishers, and PDP | 170 | CA Science Framework |
| Ventura COE | Phase IV Rollout | November  29–30, 2017 | Teacher, Administrators, Publishers, and PDP | 240 | CA Science Framework |
| Santa Clara COE | Phase IV Rollout | December  4–5, 2017 | Teacher, Administrators, Publishers, and PDP | 255 | CA Science Framework |

* The CDE, the State Board of Education (SBE), and the CCSESA work in a collaborative manner to enable a strong and highly leveraged, coordinated approach to California Academic Standards implementation. The Standards Implementation Steering Committee, Collaboration Committees, and Communities of Practice support standards implementation through collaborative and coordinated efforts at the state, regional, and local levels in the areas of curriculum, instruction, and professional learning. The key is all participants are learners who accept a continuous improvement approach. Important partners include teachers, site and district administrators, members of school boards, parents, and representatives of business communities in addition to the CSTA, CSP, and K–12 Alliance at WestEd.

| **Organization (LEA/COE/District)** | **Activity** | **Date** | **Target Population (teachers/students/parents)** | **Number Attended** | **Topics** |
| --- | --- | --- | --- | --- | --- |
| SBE, CDE, and CCSESA | Science Community of Practice Meeting | June 22–23, 2017 | District and School Administrators, County Science Specialists, Teacher Leaders, Subject Matter Partners, Stakeholders | 105 | Supporting State, Regions, Districts, and Administrators with CA NGSS Implementation |
| SBE, CDE, and CCSESA | Science Community of Practice Meeting | October  18–19, 2017 | District and School Administrators, County Science Specialists, Teacher Leaders, Subject Matter Partners, Stakeholders | 129 | Supporting State, Regions, Districts, and Administrators with CA NGSS Implementation |
| SBE, CDE, and CCSESA | Science Collaboration Committee Meeting | August 16, 2017 | District and School Administrators, County Science Specialists, Teacher Leaders, Subject Matter Partners, Stakeholders | 35 | Strategize on statewide professional learning, networking and sharing of best practices, and regional action planning for future Science Community of Practice Meetings |

* The CSP continues to provide high-quality professional development (PD) statewide through the leveraging of its 13 regional sites in partnership with the Universities of California (UC), the California State Universities (CSU), and private universities. Whenever possible, CSP also partners with COEs and other professional development providers to extend the support provided to schools and districts. In order to reach a variety of educator audiences, the CSP programs range from formal multi-year partnerships with districts (63 district partnerships are currently active through external grants or contracts), open multi-day institutes, and workshops. Programs are tailored to the needs of the regional participants and depend on the actual level of implementation of the CA NGSS. The CSP is also a partner in the Collaboration Committees, the Communities of Practice, and CA NGSS Rollout Symposia.

| **Organization (LEA/COE/District)** | **Activity** | **Date** | **Target Population (teachers/students/parents)** | **Number Attended** | **Topics** |
| --- | --- | --- | --- | --- | --- |
| Bay Area Science Project | The Alameda Follow-Up | June – November, 2017 | Teachers | 18 | CA NGSS professional learning, language development support, formative assessment strategies |
| Bay Area Science Project | Saturday Seminar | June – November, 2017 | Teachers | 18 | CA NGSS professional learning, language development support, formative assessment strategies |
| Bay Area Science Project | Educational Pathways Into College and Career Solar Academy | June – November, 2017 | Teachers | 103 | CA NGSS professional learning, language development support, formative assessment strategies |
| California Science Project: Statewide Office | Jurupa USD Districtwide PD – Secondary Principals | June – November, 2017 | Administrators | 9 | CA NGSS professional learning, language development support, formative assessment strategies |
| California Science Project: Statewide Office | Jurupa USD Districtwide PD – Elementary Principals | June – November, 2017 | Administrators | 18 | CA NGSS professional learning, language development support, formative assessment strategies |
| California Science Project: Statewide Office | CA NGSS PD – Chaffey 2017–18 | June – November, 2017 | Teachers | 34 | CA NGSS professional learning, language development support, formative assessment strategies |
| California Science Project: Statewide Office | CA NGSS PD – Alvord USD 2017–18 | June – November, 2017 | Teachers | 35 | CA NGSS professional learning, language development support, formative assessment strategies |
| California Science Project: Statewide Office | Jurupa USD Districtwide PD – Grade 4 | September 2017 | Teachers | 58 | CA NGSS professional learning, language development support, formative assessment strategies |
| California Science Project: Statewide Office | Jurupa USD Districtwide PD – Grade 1 | September 2017 | Teachers | 60 | CA NGSS professional learning, language development support, formative assessment strategies |
| California Science Project: Statewide Office | Jurupa USD Districtwide PD – Grade 2 | September 2017 | Teachers | 60 | CA NGSS professional learning, language development support, formative assessment strategies |
| California Science Project: Statewide Office | Jurupa USD Districtwide PD – Grade 3 | September 2017 | Teachers | 60 | CA NGSS professional learning, language development support, formative assessment strategies |
| California Science Project: Statewide Office | Jurupa USD Districtwide PD – Grade 6 | September 2017 | Teachers | 61 | CA NGSS professional learning, language development support, formative assessment strategies |
| California Science Project: Statewide Office | Jurupa USD Districtwide PD – Grade 5 | September 2017 | Teachers | 63 | CA NGSS professional learning, language development support, formative assessment strategies |
| California Science Project: Statewide Office | Jurupa USD Districtwide PD – Grades 7–12 | June – November, 2017 | Teachers | 72 | CA NGSS professional learning, language development support, formative assessment strategies |
| California Science Project: Statewide Office | Jurupa USD Districtwide PD – Grade K | June – November, 2017 | Teachers | 74 | CA NGSS professional learning, language development support, formative assessment strategies |
| Central Valley Science Project | Teaching Environmental Sustainability – Model My Watershed – CA NGSS Learning In Action Cohort 3 | June – November, 2017 | Teachers | 14 | CA NGSS professional learning, language development support, formative assessment strategies |
| CSU Sacramento Mathematics Project | SacMAST-L Science Summer Institute 2017 | June – November, 2017 | Teachers | 14 | CA NGSS professional learning, language development support, formative assessment strategies |
| Delta Sierra Science Project | Delta Sierra Science Project: Modeling, Computation, and Simulation in High School | June – November, 2017 | Teachers | 30 | CA NGSS professional learning, language development support, formative assessment strategies |
| East Bay Science Project | Math and Science PD | June – November, 2017 | Teacher Leaders | 4 | CA NGSS professional learning, language development support, formative assessment strategies |
| East Bay Science Project | Science Literacy and Google Apps | June – November, 2017 | Teacher Leaders | 4 | CA NGSS professional learning, language development support, formative assessment strategies |
| East Bay Science Project | STEM Forces and Motion Short Course | June – November, 2017 | Teacher Leaders | 6 | CA NGSS professional learning, language development support, formative assessment strategies |
| East Bay Science Project | Summer Institute | June – November, 2017 | Teachers | 29 | CA NGSS professional learning, language development support, formative assessment strategies |
| East Bay Science Project | California CA NGSS Rollout | June – November, 2017 | Teachers/ Teacher Leaders/Administrators | 273 | CA NGSS professional learning, language development support, formative assessment strategies |
| Inland Northern Science Project | Sacramento River Floodplain Ecology Institute – Chico | June – November, 2017 | Teachers | 19 | CA NGSS professional learning, language development support, formative assessment strategies |
| Inland Northern Science Project | 17th Annual Science Teaching Symposium | June – November, 2017 | Teachers | 27 | CA NGSS professional learning, language development support, formative assessment strategies |
| Inland Northern Science Project | CA NGSS Shifts for Integrated STEM | June – November, 2017 | Teachers | 44 | CA NGSS professional learning, language development support, formative assessment strategies |
| Inland Northern Science Project | SEES-Science and Environmental Engineering for Secondary – Year 2 | June – November, 2017 | Teachers | 66 | CA NGSS professional learning, language development support, formative assessment strategies |
| Sacramento Area Science Project | Dixon Chemistry Training | October 10, 2017 | Teacher Leaders | 2 | CA NGSS professional learning, language development support, formative assessment strategies |
| Sacramento Area Science Project | Model-Based Educational Resources (MBER) Dixon Training | October 9, 2017 | Teacher Leaders | 7 | CA NGSS professional learning, language development support, formative assessment strategies |
| Sacramento Area Science Project | Roseville CA NGSS: Grades 7–8 | September 15, 2017 | Teacher Leaders | 13 | CA NGSS professional learning, language development support, formative assessment strategies |
| Sacramento Area Science Project | Roseville Middle School: Grade 6 Lesson revision | June – November, 2017 | Teachers | 15 | CA NGSS professional learning, language development support, formative assessment strategies |
| Sacramento Area Science Project | MBER Summer Institute | June – November, 2017 | Teachers | 24 | CA NGSS professional learning, language development support, formative assessment strategies |
| Sacramento Area Science Project | Arbuckle Elementary CA NGSS | September 27, 2017 | Teachers | 27 | CA NGSS professional learning, language development support, formative assessment strategies |
| Sacramento Area Science Project | Arbuckle Elementary CA NGSS | August 30, 2017 | Teachers | 33 | CA NGSS professional learning, language development support, formative assessment strategies |
| Sacramento Area Science Project | Pierce Unified K–12 CA NGSS Training | August 9, 2017 | Teachers | 40 | CA NGSS professional learning, language development support, formative assessment strategies |
| Sacramento Area Science Project | Project TEAMS Summer Institute 2017 | June – November, 2017 | Teachers | 48 | CA NGSS professional learning, language development support, formative assessment strategies |
| Sacramento Area Science Project | iSEE Summer Institute | June – November, 2017 | Teachers | 69 | CA NGSS professional learning, language development support, formative assessment strategies |
| Sacramento Area Science Project | Elementary K–3 Roseville CA NGSS Introduction | September 15, 2017 | Teachers | 70 | CA NGSS professional learning, language development support, formative assessment strategies |
| Sacramento Area Science Project | Science in the River City | October 24, 2017 | Teachers | 111 | CA NGSS professional learning, language development support, formative assessment strategies |
| San Diego Science Project | Reproductive Oncofertility Science Academy | June – November, 2017 | Teacher Leaders | 4 | CA NGSS professional learning, language development support, formative assessment strategies |
| San Diego Science Project | EPA Earthlab Science Academy | June – November, 2017 | Teachers | 24 | CA NGSS professional learning, language development support, formative assessment strategies |
| San Diego Science Project | SDCOE Elementary Science Academy | June – November, 2017 | Teachers | 37 | CA NGSS professional learning, language development support, formative assessment strategies |
| San Diego Science Project | K–12 Alliance CA NGSS Early Implements Institute | June – November, 2017 | Teachers | 38 | CA NGSS professional learning, language development support, formative assessment strategies |
| San Fernando Valley Science Project | Asking Questions | September 1, 2017 | Teacher Leaders | 10 | CA NGSS professional learning, language development support, formative assessment strategies |
| San Fernando Valley Science Project | Technology Bootcamp | June – November, 2017 | Teacher Leaders | 13 | CA NGSS professional learning, language development support, formative assessment strategies |
| San Fernando Valley Science Project | Developing and Using Models | June – November, 2017 | Teachers | 29 | CA NGSS professional learning, language development support, formative assessment strategies |
| San Fernando Valley Science Project | Science and Engineering Practices | June – November, 2017 | Teachers | 29 | CA NGSS professional learning, language development support, formative assessment strategies |
| San Fernando Valley Science Project | CA NGSS & Environmental Principles & Concepts | June – November, 2017 | Teachers | 51 | CA NGSS professional learning, language development support, formative assessment strategies |
| San Fernando Valley Science Project | CA NGSS & Environmental Principles and Concepts – Part 2 | June – November, 2017 | Teachers | 51 | CA NGSS professional learning, language development support, formative assessment strategies |
| South Coast Science Project (SCSP) | SCSP Summer Institute 2017 | June – November, 2017 | Teachers | 45 | CA NGSS professional learning, language development support, formative assessment strategies |
| UCLA Science Project | Little Lake Secondary | June – November, 2017 | Teacher Leaders | 6 | CA NGSS professional learning, language development support, formative assessment strategies |
| UCLA Science Project | Hawthorne Secondary School CA NGSS Professional Development | June – November, 2017 | Teacher Leaders | 8 | CA NGSS professional learning, language development support, formative assessment strategies |
| UCLA Science Project | Lawndale CA NGSS PD | June – November, 2017 | Teacher Leaders | 8 | CA NGSS professional learning, language development support, formative assessment strategies |
| UCLA Science Project | Hawthorne Elementary | June – November, 2017 | Teacher Leaders | 10 | CA NGSS professional learning, language development support, formative assessment strategies |
| UCLA Science Project | UCLA Science Project: CA NGSS Culver City HS | June – November, 2017 | Teachers | 11 | CA NGSS professional learning, language development support, formative assessment strategies |
| UCLA Science Project | Azusa CA NGSS | June – November, 2017 | Teacher Leaders | 12 | CA NGSS professional learning, language development support, formative assessment strategies |
| UCLA Science Project | El Rancho CA NGSS Workshops | June – November, 2017 | Teachers | 14 | CA NGSS professional learning, language development support, formative assessment strategies |
| UCLA Science Project | Centinela Valley CA NGSS PD | June – November, 2017 | Teachers | 16 | CA NGSS professional learning, language development support, formative assessment strategies |
| UCLA Science Project | Bassett CA NGSS PD | June – November, 2017 | Teachers | 18 | CA NGSS professional learning, language development support, formative assessment strategies |
| UCLA Science Project | Little Lake Elementary PD | June – November, 2017 | Teachers | 21 | CA NGSS professional learning, language development support, formative assessment strategies |
| UCLA Science Project | UCLA Nanoscience | June – November, 2017 | Teachers | 23 | CA NGSS professional learning, language development support, formative assessment strategies |
| UCLA Science Project | TPASS – Montebello CA NGSS PD | June – November, 2017 | Teachers | 25 | CA NGSS professional learning, language development support, formative assessment strategies |
| UCLA Science Project | San Marino K–12 CA NGSS PD | June – November, 2017 | Teachers | 28 | CA NGSS professional learning, language development support, formative assessment strategies |
| UCLA Science Project | Montebello Elementary CA NGSS Workshops | June – November, 2017 | Teachers | 32 | CA NGSS professional learning, language development support, formative assessment strategies |
| UCLA Science Project | UCLA Science Project Alhambra Unified CA NGSS Elementary PD | June – November, 2017 | Teachers | 464 | CA NGSS professional learning, language development support, formative assessment strategies |
| UCSF Science Project Science and Health Education Partnership | Cellular Construction Workshop | June – November, 2017 | Teacher Leaders | 10 | CA NGSS professional learning, language development support, formative assessment strategies |
| UCSF Science Project Science and Health Education Partnership | EPA Earthlab Science Academy | June – November, 2017 | Teachers | 13 | CA NGSS professional learning, language development support, formative assessment strategies |
| UCSF Science Project Science and Health Education Partnership | 2017–18 Daly Ralston Resource Center | June – November, 2017 | Teachers | 37 | CA NGSS professional learning, language development support, formative assessment strategies |
| UCSF Science Project Science and Health Education Partnership | 2016–17 Daly Ralston Resource Center | June – November, 2017 | Teachers | 153 | CA NGSS professional learning, language development support, formative assessment strategies |

* The CSTA collaborated with the National Science Teachers Association (NSTA) to produce the National Conference on Science Education in Los Angeles. The CSTA is also a partner in the Collaboration Committees, the Communities of Practice, and CA NGSS Rollout Symposia.

| **Organization (LEA/COE/District)** | **Activity** | **Date** | **Target Population (teachers/students/parents)** | **Number Attended** | **Topics** |
| --- | --- | --- | --- | --- | --- |
| California Science Teachers Association | CSTA Annual Conference | October 12–15, 2017 | Teachers | 1,755 | Short courses, Workshops, Key Notes, and Breakout Sessions related to CA NGSS |

* The K–12 Alliance provided direct services to several districts including the Early Implementation Initiative; and four California Mathematics and Science Partnership grant projects. The K–12 Alliance is also a partner in the Collaboration Committees, the Communities of Practice, and CA NGSS Rollout Symposia.

| **Organization (LEA/COE/District)** | **Activity** | **Date** | **Target Population (teachers/students/parents)** | **Number Attended** | **Topics** |
| --- | --- | --- | --- | --- | --- |
| K–12 Alliance (with partners: CSP, CSTA, COE, CDE, CCSESA) | Accelerate into CA NGSS Trainer of Trainers | November 16–17, 2017 | Teacher trainers | 140 | Makeup session for those who missed CA NGSS Phase I, II, and/or III Rollouts |
| K–12 Alliance (with partners: CDE, CCSESA) | Science Collaboration Committee and Community of Practice | August 2017; October 18–19,  2017 | Teacher leaders | 120 | Math science connections; presentation by Vista USD for the Early Implementers on CA NGSS |
| K–12 Alliance | CSTA | October 12–15,  2017 | Teachers | Various numbers | 2 short courses: learning from Early Implementers on CA NGSS; Literacy and Science; more than 28 workshops |
| K–12 Alliance | June Leadership Meeting | June 21–25,  2017 | Teacher and administrative leaders from the Early Implementation Initiative | 140 | Phenomenon-based Instruction, 3D learning, Assessment, Leadership |
| K–12 Alliance | Early Implementation Summer Teacher Leader Institutes | July 24–28, 2017; July 31–August 4  2017 | Teacher leaders from the  Early Implementation Initiative | 500 | Content, pedagogy and leadership for K-8 teachers around CA NGSS |
| K–12 Alliance | Lesson Study and Technical Assistance | Ongoing | Teacher leaders from the Early Implementation Initiative | 500 | Teaching and learning in an CA NGSS classroom |
| K–12 Alliance | District Technical Assistance | Ongoing; on demand from district requests | Leadership teams | 60 | Deepening Understanding of CA NGSS and Strategic Planning |
| K–12 Alliance | District Technical Assistance | Ongoing; on demand from district requests | Grade level teachers | 260 | What CA NGSS looks like in grade level lessons |

1. **Provide CA NGSS-aligned instructional resources designed to meet the diverse needs of all students.**

| **Organization (LEA/COE/District)** | **Activity** | **Date** | **Target Population (teachers/students/parents)** | **Number Attended** | **Topics** |
| --- | --- | --- | --- | --- | --- |
| CDE | Executive Summary of the Science Framework for California Public Schools: Kindergarten Through Grade Twelve (CA Science Framework) | Fall 2017 | County Offices, Districts, Administrators, Teachers, Parents, and Students | N/A; online resource | Science Framework Executive Summary |
| CDE | Parent/ Guardian Brochures | Fall 2017 | County Offices, Districts, Administrators, Teachers, Parents, and Students | N/A; online resource | Parent/Guardian Brochures |
| CDE | Update on CA Science Instructional Materials | July 21, 2017 | Instructional Quality Commission and SBE | N/A; online resource | Recruitment and appointment of Instructional Materials Reviewers (IMRs), and Content Review Experts (CREs) |
| CDE | Publication of Next Generation Science Standards for California’s Public Schools: Kindergarten Through Grade Twelve (CA NGSS). | December 2017 | County Offices, Districts, Administrators, Teachers | N/A; online resource | CA NGSS Publication |
| K–12 Alliance, Achieve, Biological Sciences Curriculum Study | Development Next Gen Analyzing Instructional Materials to select instructional materials | June 22–24, 2017; and on-site August  2017 | District Instructional Materials selection committees | 96 | District Tools and processes for district selection and implementation of IM |
| K–12 Alliance, Stanford Center for Assessment, Learning and Equity (SCALE) | Field Test | Fall 2017 | Teachers | 12 | Field test of middle school units developed by SCALE |
| K–12 Alliance Early Implementation Initiative | Learning Sequence Development | July – December, 2017 | K–8 teachers (writers, read behinds, and field testers) | 65 | Development of grade level sequences In physical science  (K–5) and  integrated (6–8) |

1. **Develop and transition to CA NGSS-aligned assessments**

That support the improvement of teaching and learning and provide information that may be used for accountability. The CDE conducted extensive outreach throughout CA to support educators with the implementation of the CA NGSS.

| **Organization (LEA/COE/District)** | **Activity** | **Date** | **Target Population (teachers/students/parents)** | **Number Attended** | **Topics** |
| --- | --- | --- | --- | --- | --- |
| CDE | In-person Meeting | June 19–20, 2017 | Science Educators | 18 | California Science Test (CAST) Pilot Data Review |
| CDE | Virtual Meeting | July 10–12, 2017 | CAST Field Test Item Review | 16 | ETS test item review meeting |
| CDE | Virtual Meeting | July 20, 2017 | California Assessment of Student Performance and Progress (CAASPP) Stakeholders | 15 | CAASPP Stakeholder Meeting |
| CDE | In-person Meeting | June 20–21, 2017 | Science Educators | 11 | California Alternate Assessment (CAA) for Science New Item Review Workshop |
| CDE | In-person Meeting | June 21–22, 2017 | Science Educators | 19 | CAST Item Review Workshop |
| CDE | Virtual Meeting | August 1, 2017 | S.D. Bechtel, Jr. Foundation members | 13 | CAST update for S.D. Bechtel, Jr. Foundation |
| CDE | Presentation | August 10–11, 2017 | CA NGSS participating states and external partners | 40 | Achieve Conference |
| CDE | Virtual Meeting | August 17, 2017 | CAASPP Assessment Stakeholders Meeting | 10 | Update on Every Student Succeeds Act Science Wavier |
| CDE | In-person and Virtual Meeting | September 28, 2017 | California District Assessment Directors | 2,420 | CDE Assessment and Accountability North Meeting |
| CDE | In-person Meeting | October 3, 2017 | California District Assessment Directors | 460 | CDE Assessment and Accountability South Meeting |
| CDE | Presentation | October 11, 2017 | Science Educators | 40 | CISC Science Subcommittee |
| CDE | Presentation | October 11, 2017 | Commission members and public | 35 | Advisory Commission on Special Education Meeting |
| CDE | Presentation | October 13, 2017 | Science Educators | 80 | California Science Teacher Association |
| CDE | Presentation | October 13, 2017 | Science Educators | 4 | California Science Teacher Association |
| CDE | Virtual Meeting | October 18, 2017 | Science Educators and Stakeholder | 10 | Stanford CA NGSS Assessment Program |
| CDE | Virtual Meeting | October 19, 2017 | CAASPP Assessment Stakeholders | 13 | CAASPP Assessment Stakeholders Meeting |
| CDE | In-person Meeting | October 20, 2017 | Sacramento Area Assessment Directors | 30 | Capital Regional Assessment Network |
| CDE | Classroom Observations | November 13, 2017 | Teachers and students | 10 | Educational Testing Service and CDE Staff |
| CDE | In-person Meeting | November 14–16, 2017 | California Science Educators | 32 | Item Writing Workshops |
| CDE | Presentation | November 16, 2017 | Special Education Administrators from County Offices of Education | 40 | Update to the CAA for Science |
| CDE | Presentation | November 29, 2017 | California Educational Research Association (CERA) | 30 | Update to the CAA for Science |
| CDE | Presentation | November 29, 2017 | CERA | 60 | Update to the CAST |
| CDE | Presentation | December 7, 2017 | SELPA Directors | 40 | Update to the CAA for Science |
| CDE | Presentation | December 10, 2017 | Science Educators | 50 | Updates to CAST and CAA for Science |
| K–12 Alliance, Stanford CA NGSS Assessment Project (SNAP) | Field test | Ongoing | Teacher leaders | 50 | Field test of SNAP items |

1. **Collaborate with parents, guardians, and the early childhood and expanded learning communities**

To integrate the CA NGSS into programs and activities beyond the K–12 school setting.

* The CSP sites use flyers and other communication materials provided through the California Alliance for Next Generation Science Standards (CA4 NGSS) to engage teachers, parents, school and district administrators and community members. The documents provide to different audiences an easy overview of the CA NGSS standards and the benefit of a science education for college and career enabling to further support science education in the local community.
* Power of Discovery: STEM funding supports the following county offices of education: Alameda, Monterey, Orange, Sacramento, and San Diego to develop regional systems of support that build the capacity of expanded learning leaders to provide more, higher quality STEM learning opportunities to all students. More information regarding this initiative can be found on the CDE Web page at <https://www.cde.ca.gov/fg/fo/r27/stem2017results.asp>. This program will bring the CA NGSS to Expanded Learning communities throughout California.
* The California Science Teachers Association uses social media to promote awareness of CA NGSS and access to available information and resources.

<https://www.facebook.com/CaliforniaScienceTeachersAssociation> (1,846 Page likes)

<https://twitter.com/cascience> (1,928 Followers)

1. **Collaborate with the postsecondary and business communities and additional stakeholders**

To ensure that all students are prepared for success in career and college.

* The CSP sites are housed in university science departments at UC, CSU, and independent colleges and most of our CSP directors are also members of the post-secondary education community as academic coordinator or science faculty. In this role, they have the capacity to also directly influence the pre-service teacher preparation pipeline.
* The CSP site leadership is regularly engaged in collaboration activities with post-secondary educators to design and implement activities for in-service and pre-service teachers.
* On August 10, 2017, the CSP Executive Director Maria Simani was invited as a keynote speaker to address the STEM faculty at a special symposium organized by the Cal State University. As a result of this event, CSP faculty from the CSU San Luis Obispo are organizing a network of CSU faculty to reform pre-service teacher education in a way that is aligned with CA NGSS 3-dimensional learning. Part of the funding for this initiative is provided by the California Science Project, remaining funds are provided by the CSU Chancellor Office.
* The California Career Technical Education Incentive Grant (CTEIG) program has been established as a state education, economic, and workforce development initiative with the goal of providing pupils in kindergarten through grade twelve, inclusive, with the knowledge and skills necessary to transition to employment and postsecondary education. The purpose of this program is to encourage the development of new career technical education (CTE) programs and enhance and maintain current CTE programs during implementation of the school district and charter school local control funding formula (LCFF) pursuant to California *E*ducation *C*ode (*EC*) Section 42238.02. Additional information can be found on the CDE Web page at [**https://www.cde.ca.gov/fg/fo/r17/cteig15ins.asp**](https://www.cde.ca.gov/fg/fo/r17/cteig15ins.asp)

1. **Seek, create, and disseminate resources**

To support stakeholders as the CA NGSS systems implementation moves forward.

| **Organization (LEA/COE/District)** | **Activity** | **Date** | **Target Population (teachers/students/parents)** | **Number Attended** | **Topics** |
| --- | --- | --- | --- | --- | --- |
| CDE | Science Community of Practice Meeting | June 22–23, 2017 | District and School Administrators, County Science Specialists, Teacher Leaders, Subject Matter Partners, Stakeholders | 105 | Supporting State, Regions, Districts, and Administrators with CA NGSS Implementation |
| CDE | Science Community of Practice Meeting | October 18–19, 2017 | District and School Administrators, County Science Specialists, Teacher Leaders, Subject Matter Partners, Stakeholders | 129 | Supporting State, Regions, Districts, and Administrators with CA NGSS Implementation |
| CDE in partnership with Californians Dedicated to Education Foundation and Commission on the Status of Women and Girls | California STEAM Symposium | December 10–11, 2017 | Educators, Community, and Business | 3,000 | Supporting State, Regions, Districts, and Administrators with CA NGSS Implementation; networking and sharing of best practices |
| SBE, CDE, and CCSESA | Science  Collaboration Committee Meeting | August 16, 2017 | District and School Administrators, County Science Specialists, Teacher Leaders, Subject Matter Partners, Stakeholders | 35 | Strategize on statewide professional learning, networking and sharing of best practices, and regional action planning for future Science Community of Practice Meetings |

1. **Design and establish systems of effective communication regarding CA NGSS among stakeholders**

To continuously identify areas of need and disseminate information.

| **Organization (LEA/COE/District)** | **Activity** | **Date** | **Target Population (teachers/students/parents)** | **Number Attended** | **Topics** |
| --- | --- | --- | --- | --- | --- |
| California Alliance for Next Generation Science Standards (CA4 NGSS) | Semiannual Meeting | December 9, 2017 | Educators, Community, and Business | 35 | Communication, Research, and Practice in CA NGSS Implementation |
| K–12 Alliance CA4 NGSS | Communication briefs | Ongoing | Districts and Parents | Various | Use of messages to meet district needs |

1. **Build coalitions to ensure a consistent message and to sustain momentum during implementation.**

* The CA4 NGSS Communications Toolkits provide education stakeholders in California with ready-to-use and source materials to introduce and communicate the value and intention of the CA NGSS and guide supporters in promoting the implementation of the CA NGSS. Prepared for the CA4 NGSS by the Californians Dedicated to Education Foundation, CSTA, and Children Now, with support from member organizations.

| **Organization (LEA/COE/District)** | **Activity** | **Date** | **Target Population (teachers/students/parents)** | **Number Attended** | **Topics** |
| --- | --- | --- | --- | --- | --- |
| CA4 NGSS | CA NGSS Communication Tool Kit (<http://cdefoundation.org/cde_programs/ca-4-ngss/> ) | Ongoing | School site leaders, district leaders, parents, general statewide audience | NA | CA NGSS Communications |