

California Department of Education

Executive Office

SBE-003 (REV. 11/2017)

tlsb-eeed-nov18item01

# California State Board of Education November 2018 Agenda Item #07

## Subject

Update on the Implementation of the *California Next Generation Science Standards*

## Type of Action

Information

## Summary of the Issue(s)

This item provides an update on the *California Next Generation Science Standards (CA NGSS) Systems Implementation Plan* (*Implementation Plan*) and state-level activities to implement the standards.

## Recommendation

No action is recommended at this time.

## Brief History of Key Issues

California *Education Code* Section 60605.85(a) required the State Superintendent of Public Instruction to submit to the State Board of Education (SBE) revised *Science Content Standards for California Public Schools, Kindergarten through Grade Twelve*. The revised science standards are based on the national *Next Generation Science Standards (NGSS).* The *NGSS* were modified for California as the *CA NGSS*, and were adopted by the SBE in September 2013 with adoption of the middle school Integrated Learning Progression Model in November 2013. More information regarding the *CA NGSS* is available on the California Department of Education (CDE) California Science Standards web page at <https://www.cde.ca.gov/pd/ca/sc/ngssintrod.asp>.

The *NGSS Systems Implementation Plan for California,* available at <https://www.cde.ca.gov/pd/ca/sc/documents/sciimpplan120214.pdf>,was adopted by the SBE in November 2014. The plan identifies major phases and activities in the implementation of the *CA* *NGSS* throughout California’s educational system. As a structural framework for these activities, the plan is grounded in eight guiding strategies including: support for professional learning; development of instructional resources and assessments; enhanced collaboration with parents, guardians, and communities to implement the standards; integration of the standards into early education and expanded learning programs; enhanced collaboration with higher education and business communities to ensure career and college readiness; development, curation, and dissemination of resources; coordination of communication efforts; and coalition building.

A summary of key state-level implementation activities is provided in Table 1.

### Table 1: Key Implementation Activities in the *Implementation Plan*

| **Date** | **Key Events** |
| --- | --- |
| September 2013 | SBE adopts the *CA NGSS* |
| November 2014 | SBE adopts the *Implementation Plan* |
| March 2016 | SBE approves the high-level test design for the California Science Test (CAST) |
| November 2016 | SBE adopts the 2016 Science Framework for California Public Schools |
| January–July 2017 | Pilot assessment of CAST and California Alternate Assessment (CAA) for science |
| January–July 2018 | CAST field test, second-year pilot of the CAA for science |
| September 2018 | Instructional Quality Commission (IQC) makes recommendations on science instructional materials |
| November 2018 | SBE public comment hearing and action on IQC’s science instructional materials recommendations |
| January–July 2019 | CAST operational test and CAA field test for science |

In 2018–19, the CDE will administer the first operational test for CAST from which science results based on the *CA NGSS* will be available for the first time. On May 11, 2016, the SBE approved, among other things, a design for including results on the *NGSS* assessment, when available, on the dashboard. (See the August 2018 SBE Information Memorandum for more information regarding this timeline at <https://www.cde.ca.gov/be/pn/im/documents/memo-pptb-amard-aug18item01.docx>.)

### Supporting Local Implementation of the *CA NGSS*

A number of state-level California agencies and organizations have important roles and responsibilities in supporting science education in California. In brief:

* The CDE provides technical assistance and support to local educational agencies (LEAs) regarding implementation of SBE-adopted science standards, curriculum frameworks, and assessments, and facilitates the dissemination of state and federal funding to support implementation of science.
* The California County Superintendents Educational Services Association (CCSESA) and the Curriculum and Instruction Steering Committee (CISC) Science Subcommittee provide collaborative leadership among County Offices of Education (COEs) to improve achievement in science education for all students and to close the achievement gap.
* The California Science Project (CSP) supports ongoing quality professional learning for educators with activities and programs designed by university faculty, teacher leaders, and teacher practitioners to improve instructional practices that lead to increased achievement for all students.
* The California Science Teachers Association (CSTA) represents science educators statewide, providing leadership opportunities for its members, advocating for policy to support science education, and supporting science professional development through an annual state conference for science educators.
* The K–12 Alliance at WestEd provides science professional development for educators that enhances content knowledge and pedagogical techniques to support science achievement for all students.

Since the adoption of the *CA NGSS*, science leaders from across these agencies and organizations have systematically come together, in collaboration with a variety of additional stakeholders, to support local implementation of the standards. Working together, these leaders have expanded California’s capacity to support local implementation efforts. Several of these collaborative implementation efforts are described below.

#### 2014–18 CA NGSS K–8 Early Implementation Initiative

In 2014, the CDE, SBE, K–12 Alliance at WestEd, and Achieve partnered to launch a large-scale demonstration initiative to begin to build capacity to implement the *CA NGSS* in kindergarten through grade eight. The S.D. Bechtel Jr. Foundation awarded grant funding to the K–12 Alliance to design, provide, and oversee professional learning for eight LEAs: Galt Joint Union Elementary School District, Kings Canyon Unified School District (USD), Lakeside Union School District, Oakland USD, Palm Springs USD, San Diego USD, Tracy USD, and Vista USD. Aspire Public Schools and High Tech High received funding from a separate source to participate in the initiative. The CA K–8 NGSS Early Implementation Initiative has been awarded additional funding to continue this work into 2020. Some of the *CA NGSS* early implementation LEAs had benefited from prior experience developing, testing, and initially evaluating professional development models under a previous California Mathematics and Science Partnership funded grant project.More information is available on the WestEd web page at <https://www.wested.org/project/california-ngss-k-8-early-implementation-initiative/>.

#### Statewide Science Collaboration Committee and Communities of Practice:

The Standards Implementation Steering Committee (SISC) is charged with creating and promoting a multi-year plan for standards and assessment implementation that will support a common understanding, language, and approach for each content area; assess existing infrastructure and resources for standards support and ensure ways to communicate promising practices, broker effective support, and identify and address gaps in the system of support; and establish a strong feedback loop of information about field needs and systems for responding. SISC members include leaders from the CDE, SBE, CCSESA, and CCSESA CISC.

One of the SISC’s early efforts was the formation of content area Collaboration Committees, including one for science. The Science Collaboration Committee includes leaders from the CDE, SBE, COEs, CSP, LEAs, CSTA, K–12 Alliance at WestEd, California Teachers Association, the Association of California School Administrators, CCSESA, and others who represent California’s diverse science education community. A key role of the Collaboration Committee is to plan professional learning for and convene statewide science Community of Practice meetings. The Science Community of Practice is comprised of county office curriculum and instruction experts, district teachers and leaders, CDE curriculum and instruction experts, and subject matter experts from other key professional learning organizations. Several times each year, the Science Community of Practice gathers for two-day meetings and focus on building the collective capacity of the group with an end-goal of mobilizing the expertise of regional teams to support implementation of the *CA NGSS* across California.

#### The NGSS Collaborative

The NGSS Collaborative was developed by the CDE, CCSESA, CSTA, California COEs, CSP, and the K–12 Alliance at WestEd 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*. The NGSS Collaborative offers the CA NGSS Rollout Symposia (rollouts) annually. These rollouts are two-day workshops which cover a variety of topics for teachers, principals, and other school leaders who wish to learn more about the *CA NGSS* and the California Science Framework. Rollouts to date include Introduction to the *CA NGSS*, Understanding the Shifts Required, Focus on Transition, and Understanding the Science Framework. To support local adoption of instructional materials, the 2018 rollout will focus on a Toolkit for Instructional Materials Evaluation (TIME). The 2019 rollout will focus on the *CA NGSS* and environmental literacy.

During the presentation of this item, the following science education leaders will provide an update to the SBE regarding their *CA NGSS* implementation work:

* Jill Grace: President, CSTA and Regional Director, K–12 Alliance at WestEd
* Susheela Nath: Science Grant Project Director, Aspire Public Schools and Project Director, *CA NGSS* K–8 Early Implementation Initiative
* Debra Schneider: Director of Instructional Media Services and Curriculum, Tracy USD and Project Director, CA NGSS K–8 Early Implementation Initiative
* Marian Murphy-Shaw: Educational Services Director, Siskiyou COE
* Ramona Chang: Director of Curriculum and Instruction, Torrance USD

## Summary of Previous State Board of Education Discussion and Action

The SBE adopted the *CA NGSS* in September 2013 and adopted the middle school Integrated Learning Progression Model in November 2013. The *Implementation Plan* was adopted by the SBE in November 2014. The CDE provided information memoranda regarding *CA NGSS* implementation to the SBE in December 2015, June 2016, September 2017, and February 2018.

## Fiscal Analysis

Not applicable.

## Attachment(s)

None