

## Science Collaborative

The Science collaborative is dedicated to the support of its members in the successful implementation of college- and career-ready state science standards. The Science Collaborative embraces a state-directed and state-led process, building capacity by collaborating in the development of examples of high-quality assessment products aligned to standards informed by the *Framework for K-12 Science Education*.

The Science Collaborative offers three in-person meetings over the membership cycle. During these meetings members focus on sharing insights and collaboration around specific needs pertaining to standards implementation. The Collaborative is composed of Science Assessment staff within state education agencies. Through these meetings, members develop tools and resources designed to support successful standards implementation and have access to invited guest experts presenting on cutting edge research and information, professional learning opportunities, and innovative projects relevant to science standards, curricula, instruction, and assessments.

In 2017-18, Science members organized into workgroups to address the long-range goal of the development of resources and guidance to inform the various levels and purposes of a comprehensive PK-12 assessment system for science with each workgroup dedicated to addressing aspects of a comprehensive assessment system in science.

In addition to the three in-person meetings, these workgroups meet virtually during the time between meetings to continue their work. The five workgroups are:

- Phenomenological Sense-Making for the Purposes of Assessment
- Infusing Formative Assessments into Three-Dimensional Lessons Using Crosscutting Concepts to Prompt Student Responses.
- Evaluating Evidence of Student Performance of 3-dimensional Sense-making (Interim Task Items)
- Innovative Strategies for 2- and 3-Dimensional Summative Assessments
- Large Scale Assessment in Science: Reporting and Operational Items

## 2017-2018 Achievements:

In the 2017-2018 program year, Science met with a series of national experts, engaged with other CCSSO groups in cross collaborative work, and finalized resources to support state work with the long-range goal of the development of resources and guidance to inform the various levels and purposes of a comprehensive PK-12 assessment system for science **Guest Speakers:**

- Lorrie Shepard, *Professor, University of Colorado at Boulder*
- William Penuel, *Professor, University of Colorado at Boulder*
- Jonathan Templin, *Professor, [University of Kansas](http://www.univkansas.edu)*
- Brett Moulding, *Director, Utah Partnership of Effective Teaching and Learning*

- **Cross collaborative work**

Below are the joint sessions, webinars, and collaborative work the Science collaborative led with other CCSSO collaboratives in the 2017-18 membership year.

- Joint session with Assessing Special Education Students (ASES) collaborative: ‘SCASS: Science Alternate, Assessment Accessibility Considerations’
- Joint session with Math collaborative: Panel Discussion on STEM Education
- Joint session with Technical Issues in Large Scale Assessment (TILSA) collaborative: Discussion on Psychometric Modeling of Three-Dimensional Assessments

## 2018-19 Goals

*CCSSO understands that new state standards are changing the paradigm of science education, and that states are playing a new role in supporting school systems implement complex, three-dimensional thinking in science.*

- Continue to provide members with access to experts in the field to share current research and support the implementation of college- and career-ready standards in science within states.
- Supporting states in the design and implementation of a comprehensive assessment through the continued work of the following five state working groups:
  - Phenomenological sense-making for the purposes of assessment
  - Infusing formative assessments into existing three-dimensional lessons using the, Science SCASS developed, *Using Crosscutting Concepts to Prompt Student Responses* primer
  - Evaluating evidence of student performance of 3-dimensional sense-making (Interim Task Items)
  - Innovative Strategies for 2- and 3-Dimensional Summative Assessments
  - Large Scale Assessment in Science: Reporting and Operational Items

## Spotlight on Equity

A focus on equity is central to CCSSO’s 2017-2020 strategic plan and our work with our members. CCSSO and state chiefs are committed to each child—regardless of background—graduating ready for college, careers, and life. In 2017, CCSSO and the Aspen Institute released [Leading for Equity: Opportunities for State Education Chiefs](#), which set forth ten commitments and a series of actions state chiefs can take to advance equity. Each of CCSSO’s collaboratives is a venue for working with national experts and collaborating with peer states to identify concrete strategies for advancing relevant commitments found in the report. Equity will play a major role in the agenda of the collaboratives over the next membership year. Examples of equity commitments from [Leading for Equity](#) the Science collaborative addresses through its work are:

- **Equity Commitment Number 6, Part C)** Align pre-K/early learning standards to K-3 standards and provide professional development for pre-K and elementary school educators.

## Anchor Document:

### [Framework for K-12 Science Education.](#)



**Biography of Advisor:**

**Matt Krehbiel** is Director of Science at Achieve. Matt is specifically responsible for managing Achieve's Educators Evaluating the Quality of Instructional Products (EQuIP) initiative for science and the Primary Evaluation of Essential Criteria (PEEC) instructional alignment tool.

**2017-18 State Members:**

AR, CA, CT, DoDEA, GA, HI, ID, IN, IA, KS, KY, ME, MD, MI, MS, MO, NE, NC, OH, OR, SC, SD, WA.

**2017-18 Industry Partners:**

American Institutes for Research (AIR), Data Recognition Corporation (DRC), Measured Progress, Northwest Evaluation Association (NWEA), Pearson, Stanford Research Institute (SRI), WestEd

