

Science

The Science State Collaborative on Assessment and Student Standards (SCASS) is dedicated to ensuring the highest quality of instructional materials and assessments are available to state and local education agencies across the country. Members have access to guest speakers presenting on cutting edge research and information, professional learning opportunities, and innovative projects relevant to science standards, curricula, instruction, and assessments. State collaboration and content experts guide the Science SCASS toward development of assessment products that represent high quality science education.

The Science SCASS 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](#). During the 2016-2017 SCASS membership year, participating states continued their work to develop high-quality instructional and assessment materials and resources based on the needs identified by state members. Some of the 2016-2017 Science SCASS accomplishments are below:

- Acting on the needs expressed by stakeholders in their states, the Science SCASS produced a number of products including
 - **Using crosscutting concepts to prompt student responses** - A primer designed to provide k-12 educators with meaningful insights into how to use crosscutting concepts to structure prompts to engage students in reasoning the causes of phenomena.
 - **Classroom science tasks for middle and high school** - A set of 5 (3 high school and 2 middle school) tasks made up of 5-6 lessons that cohesively build on one another. These three-dimensional science tasks provide formative assessment opportunities for educators as their students engage in explaining phenomena and designing solutions to problems.
- Providing members professional learning opportunities through presentations by nationally recognized science education experts and researchers. In 2016-2017, Science SCASS members have engaged with the following presenters, among others:
 - **Heidi Schweingruber**, Director of the Board on Science Education
 - **Kathleen Scalise**, Associate Professor at the University of Oregon
 - **Edys Quellmalz**, Director of Technology Enhanced Assessments at WestEd
 - **William Penuel**, Professor of Learning Sciences at the University of Colorado at Boulder
 - **Lorrie Shepard**, Distinguished Professor at the University of Colorado at Boulder
 - **Jim Pellegrino**, University of Illinois at Chicago
- Learning from other states through presentations by members on initiatives and projects being implemented. A partial list is offered below:
 - How Do We Make Formative Assessment a Culturally Relevant Endeavor - **Amber McCulloch (WA)**
 - Developing Large-Scale Assessments Utilizing Local Educator Expertise - **Dawn Cope (WA) & Tamara Smolek (MI)**
- Recognizing the importance of a balanced science assessment system, both as a collaborative and as an individual Science SCASS member. To this end the Science SCASS has been actively engaged in designing a set of guidelines to inform the design, purposes, and importance of such a balanced system.

In 2017-2018 the Science SCASS plans to build on the work of previous years by

- Continuing to collaborate with other SCASS groups. The Science SCASS has enjoyed the benefit of collaborating with the TILSA, ASES, and FAST SCASS around a number of topics of importance to science assessments. These joint sessions provide members from different SCASS groups the opportunity to exchange expertise and ideas in addressing issues pertaining to assessment and implementation.
- Providing members with access to experts in the field to share current research and how it supports the initiatives and implementation efforts within states. Researchers value the opportunity to share and gain feedback from state members.
- Supporting states in the design and implementation of a balanced assessment system for science. Building on research such as the National Research Council reports *Developing Assessments for the Next Generation Science Standards* and *Seeing Students Learn Science*, the Science SCASS will continue to explore ways to build a "classroom up" approach to science assessment.
- Seeking and incorporating stakeholder feedback, the Science SCASS will continue to develop Open Educational Resource (OER) tools, resources, and products to support and inform science educators across the country.

Advisor: Peter McLaren

Peter McLaren is Director of Next Gen Education, LLC, working with states and districts in the implementation of standards informed by the Framework for K-12 Science Education. Prior to his current work, McLaren served in a number of roles in science education policy including Director of State and District Support for Science at Achieve, Science and Technology Specialist at the Rhode Island Department of Education (RIDE), and President of the Council of State Science Supervisors (CSSS) from July 2010 until April 2013. McLaren also served as a member of the national writing committee for the Next Generation Science Standards (NGSS), the National Academy of Engineering's LinkEngineering committee, and the National Academy of Science's Committee for Developing Assessments for the Next Generation Science Standards.

Before joining RIDE in 2005, McLaren was a teacher of science for 13 years at both the high school and middle school levels. An award-winning educator, he was recognized with the Milken Family Foundation National Educator Award (2001) and as the Rhode Island Science Teacher of the Year (1995) by the MIT-sponsored Network of Educators of Science and Technology.

