NGSS NOW

6 things to know about quality K-12 science education in **April 2019**

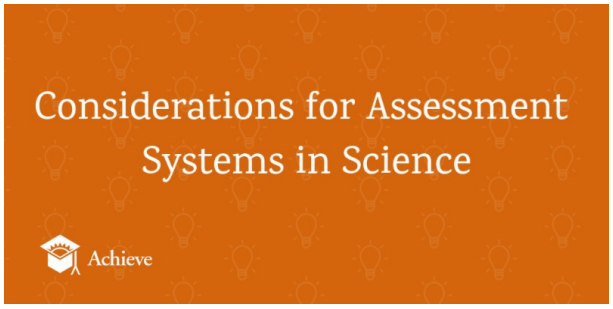
1 Don't Miss Achieve at the NSTA National Conference!

The 2019 NSTA National Conference is happening later this week in St. Louis! The Achieve team will be on the ground offering a number of sessions you won't want to miss:

- Wednesday, April 10, 9:00 a.m. - 4:00 p.m.: NextGen TIME: Transforming Implementation Through Materials Evaluation (separate registration required) with Matt Krehbiel (Achieve), Jo Topps (K-12 Alliance/WestEd), and Jody Bintz (BSCS)
- Thursday, April 11, 8:00 - 9:00 a.m.: I Spy a Pattern: Leveraging the Crosscutting Concepts to Support Diverse Students' Sense-Making with Aneesha Badrinarayan
- Thursday, April 11, 2:00 - 3:00 p.m.: Passing the Sniff Test: What Are Publishers Really Telling You in Their Alignment Claims? with Vanessa Wolbrink
- Friday, April 12, 11:00 a.m. - 12:00 p.m.: Using the EQuIP Rubric to Improve Instruction with Matt Krehbiel and Tricia Shelton (NSTA)
- Friday, April 12, 3:30 - 4:30 p.m.: NextGen TIME: Toolkit for Instructional Materials Evaluation/Transforming Implementation Through Materials Evaluation with Matt Krehbiel and Jody Bintz (BSCS)
- Saturday, April 13, 8:00 - 9:00 a.m.: Assessing What Matters: Using 3-D Assessments as a Lever for Equity in the Classroom with Aneesha Badrinarayan
- Saturday, April 13, 2:00 - 3:00 p.m.: What Does it Look Like? Assessing 3-D Learning in the Classroom: How to Navigate Opportunities and Pitfalls with Aneesha Badrinarayan

Follow @OfficialNGSS and #NSTA19 on Twitter. Hope to see you there!

2 Considerations for Assessment Systems in Science



If you're thinking about three-dimensional science assessment, you won't want to miss the *Considerations for Assessment Systems in Science* guide, which describes the implications of the Task Annotation Project in Science for decisionmakers and assessment systems - including both classroom-based and external (e.g., district- and state-wide tests and systems).

Make sure to also check out the full set of resources recently released as part of the Task Annotation Project in Science. These tools are intended to show educators what it looks like to give students tasks that measure three-dimensional science standards. In addition to annotated examples of classroom tasks, resources include emerging models and guidelines about assessment must-haves, phenomena, equity, sense-making, practices, and crosscutting concepts for educators who want to design their own three-dimensional performance tasks, as well as tools educators and developers can use to figure out whether tasks they are considering using are really going to provide meaningful feedback to students, their parents and teachers, and policymakers in districts and states.

3 Contemporary Instructional Approaches to Promote STEM Learning for English Learners

Okhee Lee, New York University Professor and NGSS Writer, wrote on the NSTA Blog about effective instructional strategies for all learners that can be pulled from the recent National Academies report, *English Learners in STEM Subjects: Transforming Classrooms, Schools, and Lives*. In the post, she identifies two common pitfalls: (1) It is best practice for English Learners (ELs) to be simultaneously learning science knowledge and practice and language. Thus, it is not necessary for educators to frontload vocabulary before the science learning starts - students should learn language while their understanding of science concepts becomes more nuanced; (2) The language that ELs learn while engaging in science practices is not limited to science vocabulary - it's also all of the language needed to engage in science practices and communicate meaning. Thus, educators should avoid simplifying language (which therefore simplifies content) for ELs, as that often lowers expectations for certain students and fails to meet grade-level content expectations.

4 Creating Science Learning Experiences that Support Learners Receiving Special Education

A new STEM Teaching Tool provides guidance for giving all students multiple opportunities and avenues for engaging in deep and meaningful sense-making about the natural and designed worlds, rather than creating cognitive, physical, behavioral, neurological, developmental, and emotional barriers. It provides considerations, tips to attend to equity, and recommended actions to support students receiving special education services.

5 The Role of Instructional Resources in Supporting Investigation and Design

A recent NSTA blog post from Joe Krajcik explores the need for excellent instructional resources for teachers to successfully implement the new vision of three-dimensional science education. Krajcik identifies several key features of high-quality instructional resources, including providing phenomena and design challenges that engage learners in three-dimensional learning; a focus on learners using evidence to construct explanations of phenomena; providing support for a wide variety of students, including those from economically disadvantaged backgrounds and racially and ethnically diverse learners; building coherently across time; and providing assessments that focus on students using the three dimensions.

6 Keeping Girls in STEM: 3 Barriers, 3 Solutions

A new piece on Edutopia examines three barriers and three solutions to keeping girls in STEM.
"Researchers don't know yet if these continuing disparities in STEM reflect the slow pace of societal change, child-rearing expectations, or something deeper and more entrenched, such as the way we think about girls' minds. But teachers can play a significant role in influencing or dispelling stereotypes in STEM education. Here are some studies from researchers and educators that may offer a few insights-and a few solutions."

NEXT GENERATION SCIENCE STANDARDS
For States, By States