NGSS NOW

6 things to know in June 2023

1 New Kindergarten Quality Unit Posted

In this kindergarten Great Minds unit, students make sense of how tugboats maneuver massive ships through crowded harbors. Students use several models to investigate the effects of stronger and weaker pushes and pulls. Students draw on their new knowledge to investigate how to prevent a tugboat from bouncing too far from its dock. They design, test, and improve a dock cushion as a solution. The unit was reviewed by NextGenScience's cadre of expert reviewers.

See the unit and the corresponding EQuIP Rubric for Science evaluation report [here](#).

2 New Research Report — Science Instructional Materials Selection and Modification: A Landscape Analysis

High-quality instructional materials are a key part of implementing science standards. However, it is rare for instructional materials to be implemented exactly as intended. Educators modify instructional materials for many reasons, including for class time and relevance to local phenomena. To learn more about the factors that affect instructional materials selection and modification, NextGenScience conducted a landscape analysis that included a national survey of educators. This report shares findings from the landscape analysis as well as recommendations for the field.

See the report here.

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3 Pennsylvania Science Education Leaders Network Impact Report and Stories from the Field
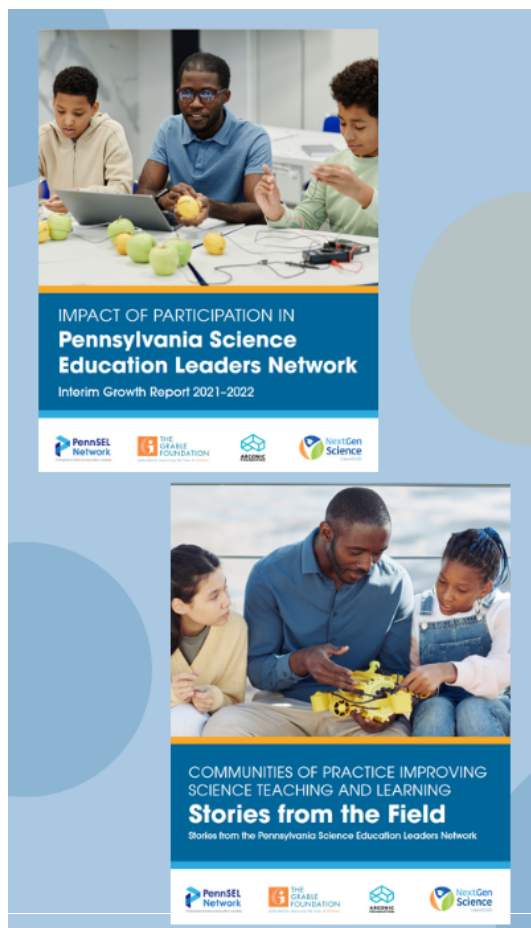
To support the transition to Pennsylvania's rigorous new learning goals for science, engineering, and environmental literacy, NextGenScience launched the Pennsylvania Science Education Leaders Network (PennSEL Network), a program to prepare teams of Pennsylvania science leaders to improve science teaching and learning for all students. NextGenScience has developed two resources that illustrate the progress PennSEL Network participants have made: A report summarizing survey findings on the impact of the PennSEL Network on participants after the first year of programming; and stories of PennSEL Network teams transitioning to new science learning goals in their communities.

4 Practice Brief: Think Globally, Act Locally

This new STEM Teaching Tool provides guidance on how the United Nations' 17 Sustainable Development Goals (SDGs) — global goals to make the world a better place for all — can be used to focus science instruction on meaningful local and global phenomena.

See STEM Teaching Tool Practice Brief 93 here.

5 Ting, Tag, Tong: Emergent Bilingual Students Investigating and Constructing Evidence-Based Explanations About Sound Production

Researchers Enrique Suarez and Valerie Otero share findings from their study of a group of multilingual third grade students who explored a guitar and used onomatopoeias to explain why the strings produced different sounds. Based on their findings, the researchers argue that a focus on the "right" scientific or academic vocabulary can limit multilingual learners from sharing and building on their conceptual thinking and cultural resources.

See the JRST article here.

6 Video of ACESSE Resource E: Selecting Anchoring Phenomena for Equitable 3D Teaching Professional Learning Session

This video provides support for professional learning facilitators of the Advancing Coherent and Equitable Systems of Science Education (ACESSE) Resource E which is designed to introduce educators to the process of selecting high-quality phenomena to drive learning in their science classrooms. The video discusses how the professional learning resource can be adapted to meet the needs of educators in various settings.

See the video here.