

NGSS NOW

6 things to know in May 2023



1 New Grade 5 High-Quality Science Unit Posted



This mySci 5th grade unit supports students to investigate an anchoring problem: we need farms to grow food, but the process of producing food for all of us can harm Earth's systems. Throughout the learning sequence, students investigate and design solutions related to the natural resources used on farms and the impact on Earth's systems. The unit was awarded the [NGSS Design Badge](#) by the NextGenScience cadre of expert reviewers.

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

2 Two Data Science Resources

Blog: Boosting Data Science Teaching and Learning in STEM

In today's technologically complex and connected world, students' needs to develop competencies and confidence with data have never been greater. A new [On the Same Wavelength](#) blog post shares work from a National Science Foundation project, [Boosting Data Science Teaching and Learning in STEM](#). The authors describe effective practices for engaging all students with data in the classroom.



See the NextGenScience blog post [here](#).

Foundations of Data Science for Students in Grades K–12



Foundations of Data Science for Students in Grades K–12 Science

This new resource from the National Academies of Science Engineering and Medicine (NASEM) shares key takeaways from the 2022 *Foundations of Data Science for Students in Grades K–12* workshop in which speakers and participants discussed the current landscape of K–12 data science education as well as what resources and teacher guidance are needed to support student learning. The resource explores why data science is important in K–12 science education and what it can look like in practice.

See the NASEM resource [here](#).

3

How a District Found Success with Implementing a New High-quality Curriculum

“Implementing a new curriculum is never smooth, it never fits just right at first, and it never magically solves all of our problems. We knew the instructional shifts and changes required to implement OpenSciEd were going to challenge teachers. We wanted to provide teachers the space to try out the pedagogy, to take risks in their classrooms and to be vulnerable as they learned new ways of learning, without high stakes accountability. So we implemented it slowly.”

See the 74 article [here](#).

4

A Tale of Two Science Classrooms

When phenomena are introduced in science classrooms, students share and discuss what they notice and wonder in order to make sense of the real world occurrence. This article compares two different approaches to facilitating discourse when students are trying to figure out phenomena in their science classrooms and how approaches can open up or constrain students from sharing their thoughts.

See the KQED article [here](#).



5

Podcast: STEM4Real in the City

In this podcast episode about equitable STEM instruction, researcher and author Dr. Bryan Brown discusses the phrase “culturally responsive science teaching” and science as a social enterprise. Through an analysis of the ways racism manifests in and out of the classroom, Dr. Brown shares implications for curriculum and science teaching and learning for all students.

Listen to the STEM4Real podcast [here](#).

6

Connecting Phenomena to the Individual, Community, and Society



“We propose that phenomena-based science learning can provide opportunities for learners to reflect on their roles and participation in different social phenomena, thus better equipping them to address issues related to equity and diversity as members of society. When learners engage with a phenomenon together, they have a shared experience that provides a reference point for learning, rather than relying solely on individuals’ prior knowledge or vocabulary. This shared experience can be leveraged not only for science learning, but also for learning related to how individuals interact with each other and society on social levels.”

Read the NSTA Connected Science Learning article [here](#).

