

NGSS NOW

7 things to know about quality K–12 science education in **March 2022**

1 New Middle School High Quality Science Unit Posted

An OpenSciEd middle school unit recently identified as high-quality supports students to investigate the connections between organisms living today and those that lived long ago. Students make sense of why a fossil of an ancient penguin doesn't look like modern day penguins and how different species of modern penguins could descend from a common ancient ancestor penguin population. The unit was awarded the [NGSS Design Badge](#) by the NextGenScience Peer Review Panel.



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

2 Blog Post: Moving Beyond Scales: What is the Difference Between “Using” and “Developing” the Three Dimensions?



How do we help make sure all students have opportunities to reach the ambitious learning goals described in *A Framework for K–12 Science Education*? The newest post from NextGenScience's [On The Same Wavelength](#) blog explores the importance of practicing and re-applying knowledge and skills in different contexts while continuing to develop new ones.

See the post [here](#).

3 Exposing and Dismantling Systemic Racism in Science Education

The latest issue of the *Journal of Science Teacher Education* focuses on exposing and dismantling systemic racism in science education. It includes several open-access articles from experts in the science education field.

See the articles [here](#).

4

Three New STEM Teaching Tools



Principals! Here's What You Can Do to Foster Equitable Three-Dimensional Science Learning

This tool provides a collection of links, considerations, and recommended actions for school leaders to build knowledge of three dimensional science learning.

See STEM Teaching Tools Practice Brief 85 [here](#).



How Do Race and Racism Connect with Science Learning in Early Childhood and Elementary Classrooms?

This tool provides context and suggestions for early childhood educators to incorporate conversations around racial justice in their classrooms. It includes both guidance for educators to reflect on their own experiences and practices in the classroom and strategies for anti-bias and anti-racist learning.

See STEM Teaching Tools Practice Brief 86 [here](#).



Identifying Local Environmental Justice Phenomena for Science and Engineering Investigations

For those seeking to learn about the Environmental Justice movement and how it can support students to advocate for change in their communities, this tool includes resources and steps educators can take in the science classroom, such as identifying relevant environmental phenomena and utilizing databases with real world data related to environmental issues.

See STEM Teaching Tools Practice Brief 87 [here](#).

5

Webinar on Culturally Responsive Science Instruction



In an upcoming Community for Advancing Discovery Research in Education (CADRE) webinar, several education researchers will be sharing their work on culturally responsive science education. Panelists will share findings from their research, including frameworks, instructional models, and resources for equitable and responsive science teaching.

Learn more about the panelists and register for the April 4 webinar [here](#).

6

A Capital Investment in Teachers and Science

"The best investment in science is an investment in teachers. With a one-time 'capital investment' in early science instruction and other simple, yet long-term supports, school district leaders can accelerate learning across all subjects, create a more equitable future for under-resourced students, and build a strong workforce pipeline for

STEM fields. Not only will this help the U.S. build a broad and deep pool of talent in Science, but since STEM careers are some of the fastest-growing and highest-paying fields, this investment will give students of all backgrounds more equitable access to a host of engaging and rewarding career opportunities."

See the District Administration article [here](#).

7 Addressing the Urgent Need for Quality K–12 Science Materials

After engaging in a listening tour with the field to inform their high school science materials review process, EdReports identified trends related to issues of inequity in science education in both instructional materials and professional learning. The webinar shares key findings from the tour, details about EdReports upcoming high school science reviews, and opportunities for professional learning.



Addressing the Urgent Need for Quality K-12 Science Materials: What's Next for High School Reviews



See the Edreports webinar [here](#).



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