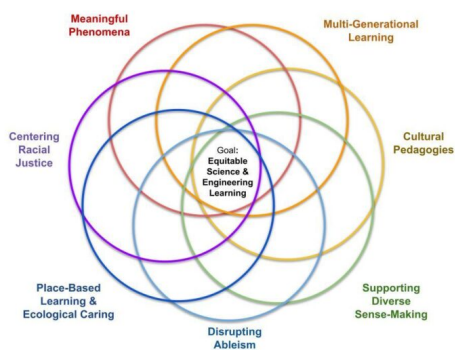


NGSS NOW

6 things to know about quality K–12 science education in **May 2021**

1 Two New STEM Teaching Tools



How can you advance equity and justice through science teaching?

STEM Teaching Tool #71 organizes resources from over 80 initiatives that support equity and social justice in science teaching and learning around seven equity project areas. The resource is designed to provide concrete examples and tools to help educators center equity in all conversations about implementing science standards.

See the resource [here](#).

How can arguing from evidence support sense-making in elementary science?

STEM Teaching Tool #72 provides research, guidance, and resources on how elementary level students can meaningfully engage in the science and engineering practice of engaging in argument from evidence. “Young children are capable of engaging in this challenging scientific practice, yet argumentation is rare in elementary school science. That needs to change in order to take educational equity seriously.”

See the resource [here](#).

2 Changing the Subject — K–12 Teachers’ Use of and Access to Science-Specific Instructional Materials, Feedback, and Professional Learning

This RAND report examines teacher-reported resources and support for science instruction and compares these supports to teacher experiences with English language arts (ELA) and mathematics instruction. The report reveals key gaps in support for science instruction and shares recommendations for improvement.

See the report [here](#).

3 Girls May Get a Science Education Boost When They Learn Outside



“When researchers evaluated students’ science grades by gender, they saw that girls who participated in the outdoor science program maintained their science grades on average, while girls’ average grades in the traditional science classes dropped. They also saw that participation in the outdoor program helped girls learn more about how science works on average, but traditional classrooms did not.”

See the article [here](#).

4 Impacts of COVID-19 on K–8 Science Instruction: Results from a Year of Disrupted Teaching

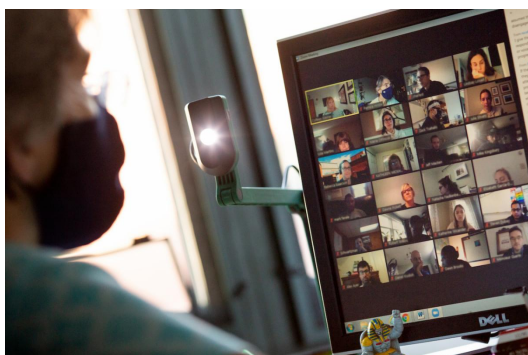
This presentation from WestEd researchers highlights impacts of the COVID-19 pandemic on K–8 science education through an analysis of two educator surveys, one from spring 2020 shortly after schools closed, and the other from spring 2021. Results reveal some of the key opportunities and challenges science educators experienced during the last year of distance learning and highlight some longitudinal findings from middle school science teachers in California.

See the resource [here](#).

Challenges to teaching science during COVID-19

	Spring 2020	Spring 2021
Less hands-on, inquiry, and exploration/investigation	44%	88%
Low student participation, motivation, and engagement in science online	34%	55%
Lack of science materials and supplies for students	24%	55%
Less student collaboration/discourse	16%	76%
Issues students face using technology (internet, devices, platforms, skills and/or experience with technology)	15%	59%

5 Science Teaching and Learning Found to Fall Off in Pandemic



This Edweek article summarizes impacts of the COVID-19 pandemic on science teaching and learning. While the shift to remote learning brought about some positive changes, such as an increase in student agency and collaboration, most researchers concluded that students and teachers struggled in remote science teaching as a result of limited science minutes, lack of access to instructional materials, and challenges related to technology.

See the article [here](#).

6 Webinar Series: Adopting Materials Through an Equity-Focused Lens

“Research shows that high-quality instructional materials can make a difference for students — yet less than 33 percent of materials used in classrooms are aligned to standards. This is a critical issue for schools and districts, particularly ones that serve students with marginalized identities and those impacted by poverty.”

EdReports' four-part webinar series highlights tools to support an equity-centered instructional materials adoption process and shares the materials adoption experiences of expert educators.

Access the webinar series [here](#).



A NextGenScience Publication
Visit ngs.wested.org/ngss-now to sign up.