

# NGSS NOW

## 7 things to know about quality K-12 science education in **October 2020**



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### 1 National Academies Report: Teaching K-12 Science and Engineering During a Crisis

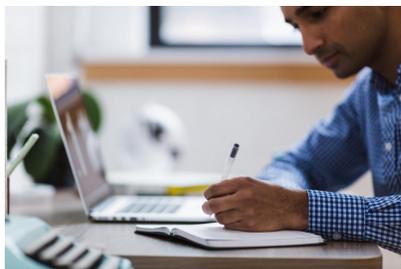
The COVID-19 pandemic is resulting in widespread and ongoing changes to how the K-12 education system functions, including disruptions to science teaching and learning environments. Incorporating input and examples from educators across the country, the Board on Science Education's latest resource describes what high-quality science and engineering education can look like during this time of great uncertainty. With an emphasis on the needs of district science supervisors, curriculum leads, and instructional coaches, the report includes guidance on how K-12 science and engineering learning experiences can (1) function during disruptions to education systems; (2) adapt as needed to support students and their families dealing with ongoing changes to instructional and home environments; and (3) remain at high quality even if time for instruction is reduced this year.



See the BOSE resource [here](#).

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### 2 How High School Science Teachers Respond in a Crisis



Last spring, as districts ramped up their online and distance learning programs, the Learning and Teaching Group at the Lawrence Hall of Science convened high school teachers to discuss, share, and collaborate on strategies for improving distance learning with a focus on increasing student engagement in the short-term. This program brief shares how high school science teachers responded to school closures and shifted to remote instruction, including lessons they learned through this work and challenges that lie ahead.

Read the brief from Lawrence Hall of Science [here](#).

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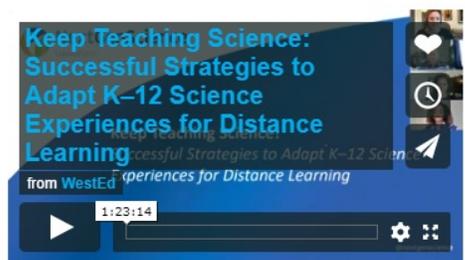
### 3 COVID-19 and Health Equity Units

The COVID-19 pandemic is a powerful reminder of the connection between science and society and the importance of exploring these questions with students. BSCS, Learning in Places, Next Generation Science Storylines, and OpenSciEd brought together a team of educators, epidemiologists, public health experts, educational equity groups, and social emotional learning experts to design a series of elementary and high school multidisciplinary units.



See the units [here](#).

### 4 Webinar Recording: Keep Teaching Science Resource



How can science lessons and units be adapted for distance learning while maintaining or enhancing the vision of the NGSS or similar standards? In this NextGenScience webinar, see examples of effective strategies to adapt materials directly from the educators who conducted the analysis for its Keep Teaching Science resource, learn from the developers about their process and design decisions, and consider how to best support educators this fall to be successful in a distance or hybrid environment.

See the recording, slide deck, and resource [here](#).

### 5 NGSS Parent Guides

With distance learning, families and caregivers have an increased presence in their students' science education. First published in 2017, these NGSS Parent Guides provide user-friendly information about how science learning looks different with the NGSS than with previous standards, as well as outlining the types of questions students will explore in each grade band.

See the NGSS Parent Guides in both English and Spanish [here](#).

### 6 New Visions Resources for Science Learning at a Distance



Based on lessons learned from teachers this spring, New Visions has revised their Unit 1 in High School Biology (which has been [identified as high quality](#) by the NextGenScience Peer Review Panel) and Earth and Space Science units for remote and blended instruction, providing guidance for teachers to maintain phenomenon-driven and coherent units. In addition, New Visions has developed a set of materials to support distance learning across content areas including a Tool for Planning and Decision-Making and a Cross-

Content Unit Zero: Launching the School Year, to support students and teachers as they launch the school year in a fully remote or blended setting.

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## 7 The Student Engagement Trap and How to Avoid It

Research shows student motivation and engagement in science are necessary and important to reach all students - not merely "nice to have." The National Academies Report, [Learning Through Citizen Science: Enhancing Opportunities by Design](#), states that students who are engaged are more likely to be attracted to challenges, use effective learning strategies, and make appropriate use of feedback. This article shares three tips to keep in mind for instructional design so that it's coherent, meaningful, and relevant to student learning, noting that superficial and flashy engagement strategies might not just be ineffective, but also detrimental to learning.



See the Edutopia article [here](#).



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