6 things to know about quality K-12 science education in March 2019

Now Available: Task Annotation Project in Science

What does it look like when students meet rigorous science standards? Achieve has spent the last year deeply studying what sets three-dimensional tasks apart from more traditional approaches to classroom science assessments. The Task Annotation Project in Science (TAPS) is a combination of science tasks that were evaluated and annotated by expert reviewers, and resources that share lessons learned from the process. This suite of resources includes annotated examples of assessment tasks for elementary, middle, and high school as well as a series of short resources on emerging models and guidelines about must-haves, phenomena, equity, sense-making, practices, and crosscutting concepts in assessments for educators who want to design their own three-dimensional performance tasks.

WEBINAR RECORDING: Click here to view a recorded presentation from the TAPS leadership group where they introduce the tools and resources, share key takeaways, and discuss how these resources can be used to help select, design, and use better assessments.

BONUS BLOG: Be sure to also read this blog post from Achieve’s Aneesha Badrinaryan detailing six steps to make science assessments better for all students.

New Quality Examples of NGSS Design, Including an NGSS Design Badge Awardee

Three units have been publicly shared as quality examples of NGSS design. They include a high school unit, How Can Science Be Used to Help Make Our Lives Better?, in which students investigate how muscles work and how they function differently in boys with and without Duchenne Muscular Dystrophy, and explore different ways that heritable diseases are passed down.

Additionally, two units earned the NGSS Design Badge this past month, which means they earned the highest rating on the EQuIP Rubric for Science. The first
Understanding White Sharks, a middle school unit that has students explore white shark encounters with humans in the U.S., and how recent reports of their increase are conveyed. The second is From Sun to Food, which was previously evaluated, had received feedback from the Science Peer Review Panel, and was shared as high quality. The developer revised the unit based on that feedback and now the unit has earned the NGSS Design Badge, the first unit for the elementary grades to do so. In this unit, students consider the question: "We eat pizza made of many ingredients. How has this pizza been made?"

3 New Data Resource: Comparing High School Graduation and Postsecondary Admissions Requirements in Mathematics and Science

Students graduating from high school should have all opportunities readily available to them, including entering a good career path, the military, or postsecondary education. However, too many students earn a high school diploma without having taken or passed the courses needed for admission into some of the major public, four-year colleges and universities in their state. This new resource released by Achieve compares high school graduation requirements for mathematics and science with the entry requirements of select postsecondary institutions in all 50 states.

4 Research Shows Girls More Likely to Be Engaged By "Doing" Science

Gender disparities in participation in STEM careers persist, and more needs to be done to garner interest and engagement in science in K-12 among girls. A recent study published in Psychological Science showed that describing science in terms of actions (e.g., "Let's do science!") as opposed to identities ("Let's be scientists!")) increased subsequent persistence in new science games among young girls, aged 4 to 9. The NGSS sets high expectations for the science content all students need to learn in order to be ready for college or careers after graduation, thereby aiming to close gaps between girls and boys in science. Furthermore, the NGSS reflects advances in science education research by enabling to learn science by doing science. Read more in this article from Futurity.

5 EdReports Releases Middle School Science Curriculum Reviews

Nonprofit organization EdReports announced the results of its first round of science reviews for
The quality NGSS example units shared online are held to a high standard: only 8 percent of submissions to the Science Peer Review Panel are highlighted on the website as high-quality examples, and only 3 percent of all submissions earn the NGSS Design Badge, the highest rating on the EQuIP Rubric for Science.