

NGSS NOW

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



1 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.



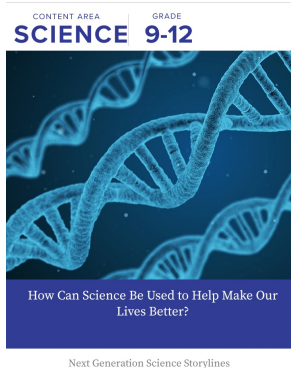
WEBINAR RECORDING: [Click here](#) to view a recorded presentation from the TAPS leadership group where they introduce the tools and resources, share key takeaways, and discuss how these resources can be used to help select, design, and use better assessments.

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.

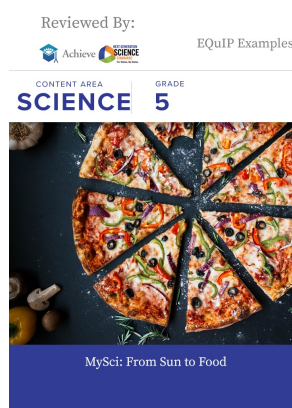
2 New Quality Examples of NGSS Design, Including an NGSS Design Badge Awardee

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.

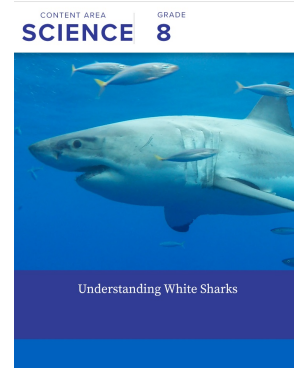
Additionally, two units earned the [NGSS Design Badge](#) this past month, which means they earned the highest rating on the EQulP Rubric for Science. The first



is [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

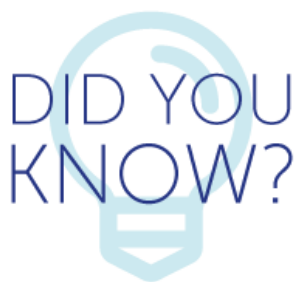
Nonprofit organization EdReports announced the results of its [first round of science reviews](#) for

curriculum for grades 6-8, including Amplify Science; Discovery Science Techbook; Houghton Mifflin Harcourt's Science Dimensions; Smithsonian Science Education Center and Carolina Biological Supply Company's Science and Technology Concepts Middle School (STCMS); and TeachTCl's Bring Science Alive Integrated and Discipline-Specific. Its findings revealed that one of the six instructional materials series, Amplify Science, fully met the criteria. EdReports will continue to review additional middle school materials in science on a rolling basis, and elementary school reports will be available early in 2020.



District Administration Article Puts the Focus on Phenomena

This [recent article](#) from *District Administration* magazine discusses how central phenomena are to NGSS instruction. It mentions how phenomena need not be "phenomenal," and can draw from everyday happenings and activities. Moreover, local phenomena allow students to make connections to the world around them. The article includes insight from educators in Connecticut, Louisiana, and Massachusetts and how they are implementing phenomena-based instruction in their classrooms. More information about phenomena and their importance in the NGSS is included in [this short guide](#).



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 EQIP Rubric for Science.

