

# NGSS NOW

## 7 things to know about quality K-12 science education in **October 2019**



### 1 New from Achieve: Frameworks for Evaluating Cognitive Complexity in Assessments

Achieve recently released three new frameworks - one each for [mathematics](#), [reading](#), and [science](#) - for the educator community working on high-quality student assessments. The frameworks, which were developed by content experts and practitioners, can be used to evaluate the cognitive complexity of assessment items through a series of discipline-specific criteria and processes. The [science framework](#) can be used to assess the degree to which an assessment task asks students to intellectually engage in and make use of disciplinary core ideas, science and engineering practices, and cross-cutting concepts in service of sense-making. Click [here](#) for an introduction to the cognitive complexity frameworks, and download the frameworks themselves [here](#).



A FRAMEWORK TO EVALUATE  
**COGNITIVE COMPLEXITY IN  
SCIENCE ASSESSMENTS**

### 2 New Grade 5 Unit has Earned the NGSS Design Badge

Reviewed By:  
Achieve EQUIP Examples

CONTENT AREA  
**SCIENCE 5**



The Garbage Unit

The Science Peer Review Panel recently awarded the NGSS Design Badge to the [Garbage Unit](#) by the [Science and Integrated Language \(SAIL\)](#) team at New York University. This unit, which focuses on the idea that the school, home, and neighborhood make large amounts of garbage every day, was developed with a specific focus on English learners by using an engaging, local phenomenon and design principles that capitalize on the mutually supportive nature of science and language learning. Check out the unit and the full EQUIP Review [here](#).

There are now eighteen quality, free and publicly available [K-12 units](#) that have been identified by the [Science Peer Review Panel](#). Trying one out in your classroom is a great way to take your instruction to the next level.

### 3 OpenSciEd Webinar Recording

In this [recording](#), Jim Ryan, Executive Director of OpenSciEd, shares a one-hour introduction to the OpenSciEd organization and the newly-released units. He discusses the publicly available materials themselves, the OpenSciEd project and development process, and a timeline for releasing a full middle school program. See the recently released OpenSciEd units, which were reviewed by Achieve's Science Peer Review Panel, [here](#), [here](#), and [here](#).



### 4 District Science Networks Webinar

Achieve recently hosted a [webinar](#) for state leaders to share lessons learned from the first year of the [Tennessee District Science Network \(TDSiN\)](#). Achieve's Vanessa Wolbrink shared important considerations in the design of the TDSiN. Then, Brian Caine, Science Coordinator for the Tennessee Department of Education, and Andrea Berry, Science and STEM Supervisor at Knox County Schools, shared the most helpful aspects of the network and how they hope to build on the work moving forward in their leadership roles at the state and district level.

### 5 Submit Your Materials to the Science Peer Review Panel!



Achieve's [Science Peer Review Panel](#) is seeking submissions of materials for review, particularly Earth and Space Sciences and Kindergarten materials. Lessons and units that are rated by the PRP as Examples of High Quality NGSS Design, Examples of High Quality NGSS Design, If Improved, or identified as Quality Works in Progress will be publicly posted along with the criterion-based EQUIP feedback. They are also promoted through this newsletter and Achieve's @OfficialNGSS twitter account so that all educators can benefit from these materials. Submit your materials [here](#) today!

### 6 Earth Science Webinar Recording

The NGSS (and similar standards based on the research of the *Framework for K-12 Science Education*) provide a unique opportunity for science educators to change their world and the worlds that their students perceive - and who's better positioned to change the world than Earth Science educators? Achieve's [Matt Krehbiel](#) [joined the National Association of Geoscience Teachers](#) to talk about changing worlds and the resources Achieve has developed in the past year as part of our ongoing work to support science educators.



### 7 From the NSTA Blog: Designing Engineering Projects That Teach Science Concepts

"A few years ago, I sadly realized that the engineering project that had been part of my electricity unit for years simply wasn't doing much for the overall goals of the course. This project involved students designing and building a model electrical system with series and parallel circuits. While the project was polished and popular with students, they spent most of their time running wires and fixing loose connections. I wanted them to be learning some science.

"Instead of trying to patch up this project, I went back to square one, considering what science ideas I really wanted my students to learn. This unit included electricity and circuits, but the core science ideas from the NGSS are really elements of PS3.A, B, and D. It was time for brainstorming: Was there an engineering application that relied on understanding how energy is conserved as it is converted to and from different forms?"

Read more [here](#).

