

NGSS NOW

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



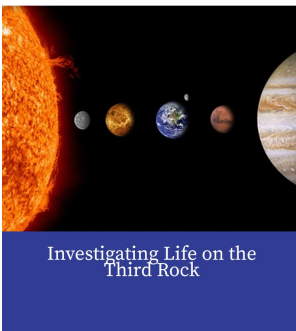
1 NEW: Two Quality Examples of NGSS Design Posted

Reviewed By:



EQuIP Examples

CONTENT AREA
SCIENCE GRADE
6-8



Investigating Life on the Third Rock

Two quality examples of NGSS design, evaluated by the Science Peer Review Panel, have been shared publicly on the NGSS website. In [Investigating Life on the Third Rock](#), middle school students work to generate and explore the overarching question of "How does the solar system and its objects affect life on Earth?" and explore Earth and space science and physical science concepts. Congratulations to the Clark County School District's [Curriculum and Professional Development Division](#) Science Department for developing this engaging example of NGSS design.

In [Community Waters](#), 4th grade students explore why flooding happens in Seattle through an engineering and Physical Sciences lens. This unit was developed through a collaboration between [IslandWood](#) and [Seattle Public Schools](#). You can view all of the quality example units [here](#).

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EQuIP Examples

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Community Waters

2 ICYMI: Achieve Announces New Members on Science Peer Review Panel



In January, Achieve announced the addition of [11 new members](#) to its Science Peer Review Panel (PRP) for its third year to expand its work evaluating lesson sequences and units designed for the NGSS and [sharing high-quality examples online](#). Out of over 200 applicants from 39 states, DC and international locations, these applicants demonstrated extensive knowledge of the NGSS and a critical eye for high-quality materials designed for the NGSS. One of the biggest challenges in NGSS implementation around the country is a lack of high-quality instructional materials designed for the NGSS. The Science PRP addresses this problem by evaluating free and publicly-available materials with the nationally-respected EQUIP Rubric for Science, identifying high-quality examples, and posting them publicly for the education community - both teachers and publishers - to see what materials faithfully designed for the NGSS actually look like. To learn more or submit your own materials for review, check out the [Science Peer Review Panel website](#).

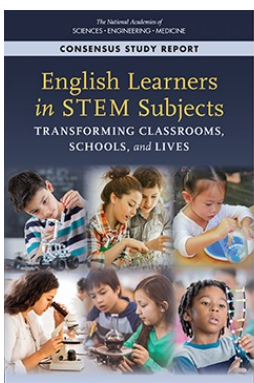
3 Using A Framework for K-12 Science Education to Overhaul Undergraduate Chemistry Courses

[This article](#) in *Chemical & Engineering News* covers how Michigan State University retooled their first-year chemistry curriculum using the National Academies of Sciences, Engineering, and Mathematics' [A Framework for K-12 Science Education](#), the document on which the NGSS performance expectations are based. In the three years since this program was implemented, test scores are up and dropout and fail rates are down. The article points out that this work was spearheaded by Melanie Cooper, who was a member of the [NGSS Writing Team](#). The instructional shifts represented in the *Framework* illustrate what we know about how students learn science, and it's great to see an example of higher education putting that into practice.

4 Link Engineering Blog Shows Engineering in the Classroom

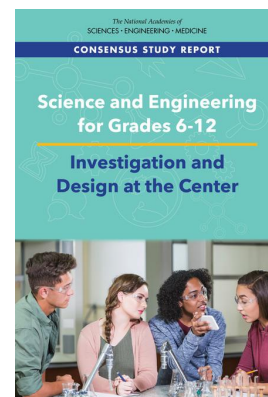
The integration of science and engineering, from kindergarten through the end of high school, is one of the important shifts in the NGSS. However, [recent research](#) shows that few educators, at any grade level, are comfortable teaching engineering content. [This blog](#) by Link Engineering curates a list of video examples of how engineering can be integrated into instruction at different grade bands. Included in this blog post is [a video](#) showcasing how one high school instructor combines life science exploration with engineering design to examine energy and matter.

5 Two Webinar Series on English Learners in STEM Subjects and Science and Engineering for Grades 6-12



Last year, NASEM published [English Learners in STEM Subjects: Transforming Classrooms, Schools, and Lives](#), which calls for a shift in how English Learners are taught STEM subjects in grades Pre-K through 12. To accompany this report, NASEM has hosted a series of four webinars, each highlighting different aspects of the report, including educator preparation, classroom instructional strategies, and building capacity for schools and districts. Recordings of these four webinars are archived on the webpage for the report itself, linked above. The fifth and final webinar in this series will be held on February 22 at 12:00pm Eastern. Learn more and register for this webinar [here](#).

NASEM also recently published a report showing that one effective way to help students learn is to engage them in science investigation and engineering design by asking questions, collecting and analyzing data, and using this evidence to better understand the natural and built world. For this report, [Science and Engineering for Grades 6-12: Investigation and Design at the Center](#), NASEM will hold a public event in Washington, D.C. on February 12, along with a similar series of webinars on March 7 and March 28. More information on these events and links to register are available on the resource page linked above.



6 Tweets about Equity in Education and the NGSS

The NGSS are designed to describe what all students should know and be able to do in science, regardless of their background. Implementation of the standards requires states, districts, and schools to confront and dispense with any prior notions about which groups of students do and do not need to be college and career ready in science. Recently, tweets from [@OfficialNGSS](#) have focused on why attending to equity, diversity, and inclusion in implementing the NGSS is vital to improve outcomes for all groups of students, particularly non-dominant groups. In addition, resources to support equitable education through instructional materials and assessments have also been shared. See this series of tweets and engage in the conversation by viewing and using the hashtag [#NGSSequity](#).

