

NGSS NOW

11 things you need to know about the NGSS this month (and a  Science fact)



February 2015

1 Resource Update

Achieve and The International Baccalaureate (IB) have just begun to collaborate with a group of teachers who have expertise in both IB and the NGSS to develop a new resource. This resource will help schools and districts understand the similarities between the NGSS and the IB programme and provide guidance on how the NGSS and IB programme can work in tandem to support advanced coursework in science.

2 Standard of the Month

[1-ESS1-1](#): Use observations of the sun, moon, and stars to describe patterns that can be predicted.

For a more in-depth look at this NGSS performance expectation and to search for others read more [here](#). Need more context? See where these ideas are introduced in [A Framework for K-12 Science Education](#) (page 173).

3 NGSS and Engineering

The NGSS represent a commitment to integrate engineering into the structure of science education by raising engineering design to the same level as scientific inquiry in science disciplines at all grade levels. There are both practical and inspirational reasons for including engineering design as an essential element of science education. For more information, see [Appendix I](#). Here are some efforts to highlight the importance of engineering across the country:

* In late January, the Boston Museum of Science's National Center for Technological Literacy [brought together](#) key stakeholders from nearly 30 organizations and institutions across the country to work together to advance PK-12 engineering education nationwide. The organizations agreed to form a community of practice to share strengths and opportunities in order to increase engineering literacy for all. Among the issues discussed: teacher preparation, research-based materials, messaging, and policy.

* [Engineers Week](#), an annual event which brings together dozens of engineering societies, educational organizations, businesses, and more, will be held from February 22-28, 2015. Engineers Week seeks to celebrate how engineers make a difference in the world, increase public dialogue about the need for engineers, and bring engineering to life for kids, educators, and parents.



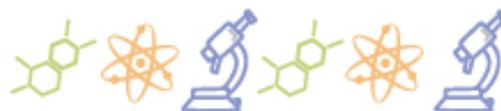
Highlighted Resources

4

Looking for resources from the National Academies Press? [AcademyScope](#) is a visualization of all of the reports that are available on the National Academies Press website (including the [Framework](#) and the [NGSS](#)), allowing you to browse through the reports of the National Academies by topic area and see relationships between titles. Check out the Education section to see resources for K-12 teachers.

5

Interested in learning more about why crosscutting concepts are included in the NGSS? Read this [short report](#) from the Smithsonian Science Education Center.



6 **QUESTION OF THE MONTH** 

Q: I have seen references to "bundling" of NGSS performance expectations (PEs). What do you mean by this?

A: "Bundling" refers to grouping performance expectations (PEs) together for purposes of both instruction and assessment. Putting PEs into bundles can be done in a variety of ways; there is no one right way to bundle them. Some options could include allowing students to explore how to answer a real-life question or make sense of a phenomena in a way that builds understanding toward three different PEs at the same time. See our "Key Message" (below).

7

Key Message for the Science Education Community

NGSS performance expectations should be bundled for the purposes of both instruction and assessment. As described in the 2014 NRC report, [Developing Assessments for the Next Generation Science Standards](#), the NGSS PEs are not intended to be assessed discretely or one-at-a-time. Instruction building toward a bundle of related PEs simultaneously will help students build a more coherent understanding of phenomena, and will also save a lot of

instructional time. However, there is no one right way to bundle PEs, so educators and others designing instructional units can be creative in their approach as mentioned above in the Question of the Month. In addition, whenever PEs are bundled for instruction or assessment planning purposes, the associated [evidence statements](#) also should be considered together in a bundle.

NGSS in the News

8

[California Districts to Pilot Next Gen Science Standards Professional Development](#)

by Dian Schaffhauser, THE Journal
January 7, 2015

"While districts are ramping up to prepare for online assessments based around the Common Core State Standards, some are also preparing for the Next Generation Science Standards. Eight school districts and two charter school organizations in California are participating in an early implementation initiative to begin development of a learning community for K-8."

9

[Consistency, Collaboration Needed for Effective Implementation of Science Teaching Standards](#)

Homeland Security News Wire
January 13, 2015

"A new report just released today by the National Research Council offers guidance to district and school leaders and teachers on necessary steps for putting the Next Generation Science Standards (NGSS) into practice over the next decade and beyond."



**SCIENCE
FUN FACT**

Being in a position of power [changes how your voice sounds.](#)

In a recent [study](#), researchers analyzed the voices of two groups of participants (those who were told they were in a position of power and those who were told they were not) by looking for differences in their pitch, resonance, and intensity. The study found that the voices of those in positions of greater power were steadier, more dynamic, and had less of a singsong sound than those who had less power. This study is an example of how the NGSS practice "Analyzing and Interpreting Data" is used to answer a real-life question.

Opinion

10

[How I Plan to Eat an Elephant Named NGSS](#)

by Taylor Sullivan
January 1, 2015

"Change doesn't come easy for me. I embrace it. I encourage it. I survive it. But it does not come easily. The Next Generation Science Standards (NGSS) were in review as I trained to become a teacher and released as I was hired for my first Science teaching position."



11

[Next Generation Science Standards: Jump Right In](#)

by Jennifer McGranahan
January 6, 2015

"In the midst of all that is new this year - implementing Common Core for Language Arts and Mathematics, the new ELA/ELD Framework and our district's Personalized Learning Plans - we are also hearing more about the Next Generation Science Standards."

