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NGSS NOW

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

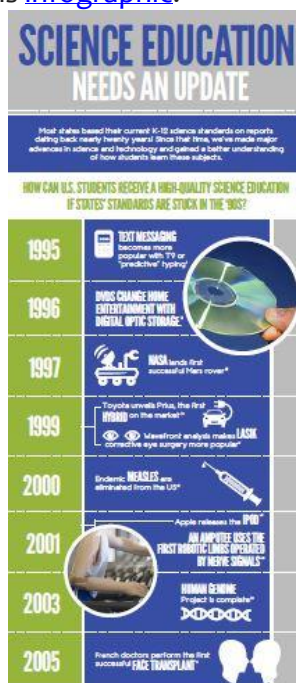


January 2015

NEW Resources

1 [NGSS Evidence Statements](#) for High School were just released (evidence statements for elementary and middle school are under development). These statements are available for each high school NGSS performance expectation and provide additional detail on what students should know and be able to do in order to satisfy that performance expectation. Given that each performance expectation is three dimensional, these statements detail what students have to do to demonstrate an integrated understanding of all three dimensions in the PE simultaneously. For more information, see the [Front Matter](#).

2 Need a visual to help show why science education standards need to be updated? Check out this [infographic](#).



3 Look out for the NGSS EQuIP Professional Learning Facilitator's Guide to be released in the coming weeks. The Facilitator's Guide consists of 10 modules designed to assist anyone interested in facilitating professional learning that will provide science educators with the processes and procedures necessary to use the EQuIP Rubric for Science. The rubric can be used to review science lessons and units, to provide effective feedback and suggestions for improvement to developers of these instructional materials, to identify model or exemplar lessons and units, and to inform the development of new instructional materials.

4 Standard of the Month

HS-PS4-1: Use mathematical representations to support a claim regarding relationships among the frequency, wavelength, and speed of waves travelling in various media.

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 131).

5 #NGSSChat

Attention Twitter users: meet two teachers who are helping their fellow educators learn about and discuss NGSS. Tricia Shelton ([@TdiShelton](#)) and Fred Ende ([@FredEnde](#)) established and continue to coordinate weekly #NGSSchat conversations on Twitter. You can join them during their chats on alternate Thursday nights (next chat is on January 22) at 9 pm EST.

Additionally, Tricia and Fred would like you to share your thoughts with them in a "NGSSchat New Year Survey," which can be accessed [here](#).

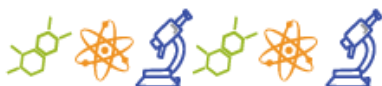
6 QUESTION OF THE MONTH

Q: I'm looking through the NGSS and I don't see any standards about lab safety or health education. Am I missing something?

A: The NGSS are science content standards based on the National Research Council's Framework for K-12 Science Education, and as such, contain neither health education standards nor lab safety standards. This is not an indication that these topics are unimportant, but rather that they go beyond the content contained in the Framework. Each state typically has both health education standards and lab safety standards or manuals that are used in addition to their science content standards. To find additional resources about lab safety, you can visit [this page](#).

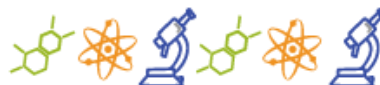
Highlighted Resources

7 Need guidance on NGSS implementation? Check out the [Guide to Implementing the Next Generation Science Standards](#) just released by the National Research Council.



8 Interested in learning more about the critical ideas in the Educators Evaluating the Quality of Instructional Products (EQuIP) Rubric for Science and how to use it to facilitate discussions about materials? Read this [short article](#) on page 9.

9 Looking for NGSS podcasts or webinars? Check out the [web seminar archives](#) from the National Science Teachers Association (NSTA).



**SCIENCE
FUN FACT**

A new algorithm [can accurately predict seizures](#) 82 percent of the time.

By using mathematics and computational thinking (an NGSS practice) to test algorithms, a team of scientists, mathematicians, and engineers made a discovery that could help solve a complex, real-world problem: the treatment of epilepsy. Devices designed to treat epilepsy use electrical currents to prevent seizures and could benefit from more precise algorithms to deliver these currents only when they're needed.

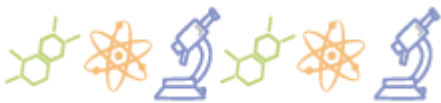
NGSS in the News

10

[Nearly 400 Oregon Elementary Teachers to be Trained in Latest Science Teaching Methods](#)

by Betsy Hammond, The Oregonian
December 10, 2014

"Seventy Oregon teachers will be trained as instructional specialists who will spread the word at their elementary schools about how to teach to new national standards for science instruction that call for more hands-on work, more investigation and more engineering."



11

[The Coalition of State Bioscience Institutes Endorses Updated and Improved Science Standards](#)

by Ann Reed Vogel
December 4, 2014

"The Coalition of State Bioscience Institutes' (CSBI) education and executive committees and 34 CSBI and CSBA members listed below today announced their endorsement of updated and improved science standards such as those embodied by the Next Generation Science Standards (NGSS), a set of K-12 benchmarks that identify science and engineering practices and content that all K-12 students should master in order to prepare for success in college and 21st-century careers."



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Key Message for the Science Education Community

Hands-on science lessons are not a guarantee of alignment to the NGSS. Although lessons that keep students engaged and get them excited about science is key to strong NGSS implementation, classroom activities also need to engage students in three dimensional learning in order to fulfill the vision of the NGSS.

For example, a traditional lab experiment may involve students collecting data to investigate a phenomenon. Unless this activity engages students in an NGSS practice (e.g., they could be planning as well as carrying out the investigation) in a way that deeply connects to at least one disciplinary core idea and explicitly identifies how crosscutting concepts help students to make sense of their findings, then the lab activity is unlikely to be fully-aligned to the NGSS despite engaging students in an exciting investigation. In other words, engagement is necessary but not sufficient.

Opinion

13

[Let's Celebrate Our First Steps on New Science Standards](#)

by David Grossman, Kentucky Teacher
December 4, 2014

"If you've spent any time at all looking at the new standards, from which the Kentucky Core Academic Standards for Science were derived, you've probably realized that they are very different from anything we've seen before in the realm of science or standards."



14

[Need high-quality science education](#)

by Paul H. Wooley, The Wichita Eagle
December 6, 2014

"An often-overlooked factor in caring for the 76 million aging baby boomers in the United States is the quality of science education for today's students - the future of medicine."



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