

Next Generation Science Standards Background

The Next Generation Science Standards (NGSS) were developed through a collaborative state-led process. Twenty-six states (including Delaware) volunteered to work with the 41 members of the writing team to lead the development of the standards. State committees consisted of representatives from the K-12 education, education policy, scientific, post-secondary education, and informal science communities. As of July 2014, twelve states (including Delaware) and the District of Columbia have adopted the NGSS as their state science education standards.

What the NGSS means for your business

- The NGSS will prepare students to enter the workforce with enhanced communication, problem-solving, and critical thinking skills as well as greater resilience—all essential skills for competing and succeeding in today's workforce.
- With the NGSS, students are required to provide evidence of their own learning, and to gain skills important for future employment such as communication, collaboration,

Science and Engineering Practices

1. Asking questions (for science) and defining problems (for engineering).
2. Developing and using models.
3. Planning and carrying out investigations.
4. Analyzing and interpreting data.
5. Using mathematics and computational thinking.
6. Constructing explanations (for science) and designing solutions (for engineering).
7. Engaging in argument from evidence.
8. Obtaining, evaluating, and communicating information.

Cross-Cutting Concepts

They are common themes that are seen across all domains of science.

1. Patterns
2. Cause-Effect: Mechanism and Explanation
3. Scale, Proportion, and Quantity
4. Systems and System Models
5. Energy and Matter
6. Structure and Function
7. Stability and Change

Disciplinary Core Ideas

An important role of science education is not to teach "all the facts" but rather to prepare students with sufficient core knowledge.

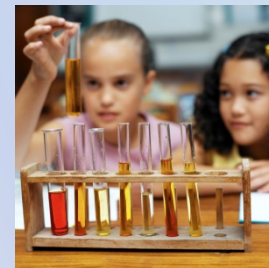
- Physical Science
- Life Science
- Earth and Space Science
- Engineering Design

For More Information:

www.nextgen.science.org

www.DelExcels.org

Delaware Department of Education
Science Department
302-735-4180



Connecting the Business Community and Science Education



Overview:

- The Next Generation Science Standards (NGSS) are a set of K-12 science standards developed by states, for states.
- The NGSS were benchmarked against countries whose students perform well in science and engineering fields, including Finland, South Korea, England, Japan and Singapore.
- The NGSS were built upon a vision for quality science education for ALL students—not just a select few.

21st Century Skills:

- By 2015, 60% of the new jobs being created will require skills currently being mastered by only 20% of the population. Job skills in science, technology, engineering, and mathematics (STEM) are among the skills experiencing the greatest increase in demand.
- The NGSS 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.

What the Business Community Can Do to Promote Science Education:

- Partner with a local school to encourage students to apply what they are learning in the science classroom to real-world situations, in the workforce, and marketplace. Help students connect their science education to their future.
- Consider submitting a letter to the editor of a local newspaper, submitting articles to business and/or education magazines, or blogs vocalizing support for the NGSS.
- Provide mentoring and offering financial resource support to STEM activities.
- Share relevant news and advocacy items on business engagement in science education through personal and professional social media channels.



Why Science Education Matters Now More than Ever:

- Science—and science education—has a big impact on the daily lives of all Americans. We increasingly have to make informed decisions on issues ranging from healthcare to energy policy that affect ourselves, our families, and our communities.
- Students will not only face unprecedented competition in the workforce within their state and country but also from global markets.
- Science education helps students become resilient critical thinkers with the knowledge needed to become capable adults in a technology-driven world.
- Science education also creates greater adaptability and flexibility in students.
- Entry level workers in STEM fields will be better prepared for the work place.

