



Board of Education Administrative Report

Title of Report: NGSS Update

Board Meeting Date: 11/25/19

Action

Report

Information

Discussion

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Executive Summary

The 2018 school year was the first operational year for the Connecticut Science Assessments aligned to the Next Generation Science Standards (NGSS). The Assessments were administered to students in Grades 5, 8 and 11. At this time only grade and individual student results were made available to districts.

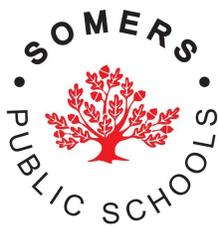
Report

The Next Generation Science Standards (NGSS) are K–12 science content standards. Standards set the expectations for what students should know and be able to do. The NGSS were developed by states to improve science education for all students. The NGSS call for a three-dimensional approach to K–12 science instruction. This represents a significant transition from previous state standards. That’s why effective implementation demands a great deal of collaboration and patience among states, districts and schools.

Three-Dimensional approach

Crosscutting Concepts help students explore connections across the four domains of science, including Physical Science, Life Science, Earth and Space Science, and Engineering Design. When these concepts, such as “cause and effect” are made explicit for students, they can help students develop a coherent and scientifically-based view of the world around them.

Science and Engineering Practices describe what scientists do to investigate the natural world and what engineers do to design and build systems. The practices better explain and extend what is meant by “inquiry” in science and the range of cognitive, social, and physical practices that it requires. Students engage in practices to build, deepen, and apply their knowledge of core ideas and crosscutting concepts.



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Disciplinary Core Ideas (DCIs) are the key ideas in science that have broad importance within or across multiple science or engineering disciplines.

These core ideas build on each other as students progress through grade levels and are grouped into the following four domains: Physical Science, Life Science, Earth and Space Science, and Engineering.

Below are the overall scores for grades 5, 8 and 11. Similar to SBAC, the overall scores are reported on a level 1-4 scale (1- Does not meet standard, 2- Approaching the standard, 3-Meets the standard, 4-Exceeds the standard)

Grade	Percent of Level 3 or above
5th	67%
8th	63%
11th	41%

In reviewing the scores, one of the major issues at the HS is that not all juniors are in juniors only science classes which makes preparing for their NGSS assessment difficult. We are currently looking at solutions to this issue and reaching out to other districts for their solutions as well.

Teachers are also looking at individual student scores to determine areas of need and alignment to the curriculum. The individual student reports are aggregated into three disciplines of science (Life, Physical and Earth). Depending on the student performance, the discipline level scores are reported as Above Standard, Approaching Standard, or Below Standard.