



Next Generation Science Standards

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Next Generation Science Standards

September 2016, Grades 6-12

September 2017, Grades K-5

NGSS were designed to realize a vision for education in science and engineering in which students actively engage in scientific and engineering practices and apply cross cutting concepts to deepen their understanding of the core ideas in these fields.

Difference between NGSS and previous standards:
Three dimensional learning – integration of scientific and engineering practices, disciplinary core ideas and cross cutting concepts.

- * **Dimension 1 – Science and Engineering Practices** are the same behaviors that scientists use to answer questions and engineers use to solve problems in the real world.
- * **Dimension 2 – Cross cutting concepts** are those concepts that apply across all scientific disciplines. Patterns, cause and effect, scale proportion and quantity, systems and systems models, energy and matter, structure and function, stability and change.

NGSS

Disciplinary Core Ideas – STEM content knowledge is grouped into four content domains:

- * **Physical Sciences**
- * **Life Sciences**
- * **Earth Sciences**
- * **Engineering, technology and application of science.**

A New Vision for Science Education

- * Facts and terminology learned as needed while developing explanations and designing solutions by evidence based arguments and reasoning
- * Systems thinking and modeling
- * Investigations, solving problems, driven by questions
- * Open ended questions, focus on strength of evidence to generate claims