

The Next Generation Science Standards (NGSS)

The NGSS are K–12 science content standards that set the expectations for what students should know and be able to do in science in order to make sense of the world around them and be ready for college, careers, and citizenship.



About the NGSS

- 1 The NGSS are for ALL students and provide a science education they can use in real life.** A strong science education equips students with both an ability to make sense of the complex world around them and foundational skills that are necessary for all careers and life.
- 2 The NGSS include the latest advances in science and research about how students best learn science.** The NGSS are based on the National Research Council's 2012 document *A Framework for K-12 Science Education*, which provides updated science content and reflects current research about student learning.
- 3 The NGSS were developed by states and their educators.** Twenty-six lead states worked with a 40-member writing team composed of classroom teachers, working scientists, and education researchers to develop the standards. Each lead state assembled a team of educators, higher education faculty, scientists, and engineers to provide feedback on the draft standards. Additionally, two public review periods captured tens of thousands of comments during development that were used to revise each draft.

Why is a high-quality science education important for all students?

- **Instruction aligned to the NGSS provides all students — regardless of background, neighborhood, or previous exposure to science — with learning experiences that deepen their understanding of science and how the world works.**
- When current students graduate from high school, more jobs will require skills in science, technology, engineering, and mathematics (STEM) than in the past. **The NGSS provide a strong science education that equips students with the ability to think critically, analyze information, and solve complex problems** — the skills needed to pursue opportunities within and beyond STEM fields.
- As citizens, we are asked to make informed decisions about a variety of issues that affect ourselves, our families, and our communities. **The NGSS not only support students' learning now, but also give students the tools they need to succeed in a rapidly and continuously changing world.**

Learn more about the Next Generation Science Standards at www.nextgenscience.org.

How do the NGSS provide a high-quality science education for all students?

- **The NGSS allow students to develop their knowledge of science as they progress from grade to grade.** The NGSS enable students to build upon their understanding of science over time, while equipping them with the foundational knowledge needed for success in college, careers, and citizenship.
- **The NGSS allow students to learn science by doing what scientists and engineers do.** When students both understand how scientists and engineers practice their craft and have opportunities to carry out investigations and design solutions, they become more engaged in their science learning.
- **The NGSS allow students to think of science learning not as memorization of disconnected facts, but as a cohesive understanding of integrated and interrelated concepts.** There are many themes (e.g., patterns, cause and effect, etc.) that bridge all science disciplines; the NGSS allow students to connect them in order to support their understanding of science and engineering in a clear and cohesive manner.