



Pennsylvania Science Teachers Association

PSTA Position Statement on the *Next Generation Science Standards (as of 01/19/2018)*

The Pennsylvania Science Teachers Association (PSTA) Board of Directors commends efforts in the Commonwealth to adopt and responsibly implement the *Next Generation Science Standards (NGSS)*, (www.nextgenscience.org). Members of our Board and other science teaching colleagues have been involved for many years with writing, reviewing, and advocating for the *NGSS* and our national organization, the National Science Teachers Association (NSTA) has a comprehensive position statement (www.nsta.org/about/positions/ngss) that is worth reviewing.

In brief, the *NGSS* are based on *A Framework for K-12 Science Education: Practices, Crosscutting Concepts, and Core Ideas* that was published by the National Research Council (NRC). The *Framework* has a number of advantages over previous national science education documents such as the *National Science Education Standards* and *Benchmarks for Science Literacy*. The *NGSS* has clear language illustrating connections between educational theory and classroom teaching, inclusion of engineering and design concepts, and an emphasis on teaching scientific practices in the early grades (K-2). This more practical approach resulted from a state-driven, and not federally driven, initiative that included 26 Lead State Partners from the beginning. In addition to many states that have already adopted the *NGSS*, some other countries are considering using these standards to reform their own science education programs.

In a broader sense, the *Framework* is a simpler document that enables states to write cohesive, *NGSS*-based standards, curriculum, and assessments that can be more readily implemented across a student's K-12 education. With the inclusion of engineering and technology standards in the *NGSS*, this builds on the momentum of the Commonwealth's current *Academic Standards for Science and Technology and Engineering Education*. Adopting the *NGSS* would move Pennsylvania in the direction of having genuine STEM (Science, Technology, Engineering and Mathematics) education in our schools.

Like its predecessors, the *NGSS* is not intended to be a national curriculum. It is the responsibility of the states to determine the curriculum, assessments, and professional development that will best serve students, schools, communities, and workforce needs.

In Pennsylvania and nationally, there is a need to complement traditional science education (Biology, Chemistry, Physics, Earth-Space Science, Environmental Science) with engineering and computer science. This is a welcome expansion since so much cutting edge research and industry occurs at the intersections of these various disciplines. It will be a challenge for our educational systems to respond accordingly, but the *NGSS* provides an opportunity to expand into genuine STEM education in the Commonwealth.

With respect to the adoption and implementation of the *NGSS* in the Commonwealth of Pennsylvania, PSTA supports the following declarations:

- Adoption of the *Next Generation Science Standards (NGSS)* as they are currently written.
- Maintaining of current science course requirements.
- Establishing teacher licensure in engineering and computer science.
- Developing K-12 curriculum in engineering and computer science education.
- Revising assessments to be aligned with *NGSS*.