



## American Association of Physics Teachers

July 29, 2013

The American Association of Physics Teachers (AAPT) supports the adoption and implementation of common, nationwide science education standards to provide a coherent science and engineering education program for all K-12 students, not just those aiming for science, technology, engineering and mathematics (STEM) careers. The Association supports the Next Generation Science Standards (NGSS) as a guide for the development of assessments for grade-level and grade-band measures of student performance in science and engineering and the Association urges states to adopt and implement the NGSS.

We emphasize, however, that the Science Standards are not meant to be a guide for curriculum development. Further work will be required to develop curricula to support students as they prepare for the assessments built on the Science Standards and to provide professional development for K-12 teachers as they implement those curricula in the classroom. The Association is prepared to work with groups of teachers, other STEM organizations, and curriculum developers to shape those curricula and to provide peer-led professional development for K-12 STEM teachers.

AAPT continues to be concerned that the NGSS student performance expectations, constructed with only one science and engineering practice associated with each disciplinary core idea, might be misinterpreted in a way that biases the curricula that are used to prepare students to satisfy the NGSS student performance expectations. We believe that an effective curriculum ought to use almost all of the science and engineering practices to support the learning of each of the disciplinary core ideas and cross-cutting concepts.

The disciplinary core ideas, cross-cutting concepts and science and engineering practices contained in the NGSS could lead to a superior curriculum that will support college and career readiness. However, college and career readiness can only be evaluated once curricula are in place, and the Science Standards' student performance expectations do not in themselves assure student readiness for college and careers. Our understanding is that the Science Standards provide performance expectations that all students are meant to satisfy. In AAPT's judgment students who intend to go to college in a STEM program may require additional course work in high school, beyond that needed to meet the NGSS performance expectations, for true college readiness.

Sincerely,

A handwritten signature in black ink, appearing to read "Beth A. Cunningham". The signature is fluid and cursive, with a long horizontal stroke at the end.

Beth A. Cunningham  
Executive Officer

A handwritten signature in black ink, appearing to read "Gay Stewart". The signature is cursive and somewhat stylized, with a prominent loop at the end.

Gay Stewart  
President

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*Strengthening Physics Education. Supporting Physics Teachers.*

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