



<http://www.cese.org>

January 6, 2013

Ms. Hanna Skandera  
Secretary  
New Mexico Public Education Department  
300 Don Gaspar Avenue  
Santa Fe, NM 87501

Madame Secretary,

The Coalition for Excellence in Science and Math Education (CESE) recommends that New Mexico adopt the Next Generation Science Standards for the following reasons:

NGSS standards are a comprehensive set of guidelines for the teaching of science that will be indispensable for teachers, administrators, and for those at the district and state level who wish to improve classroom teaching and learning in science. We find several features of NGSS to be particularly helpful.

- In addition to performance expectations, science and engineering practices have been included. These “practices” are more useful to science teachers K-12 than the “nature of science” and “inquiry” guidelines in current and earlier state standards because they appear on the same pages with the performance standards and are specific to them. The writers of NGSS have carefully avoided language that is too prescriptive in terms of classroom instruction, while making it clear that science is far more than a collection of disconnected facts.
- The descriptions of the *process of science* are particularly thorough, leading students to become more science-literate; they are more likely to leave school with a practical understanding and greater awareness of science in their daily lives.
- “Clarification statements” include amplifying information for each performance objective. These will help avoid misinterpretation, particularly for new teachers, and provide confirmation for those who are more experienced.
- The “crosscutting concepts” illustrate how scientific facts and core ideas fit into larger narratives of relationships in the natural world. This will help teachers develop meaningful unit plans that consider scope, sequence, and integration.
- Connections to Common Core English and math standards are well outlined.

### **Implementation of NGSS in New Mexico**

If we are to achieve the ambitious and dynamic vision described in the NGSS and accompanying documents, considerable resources will have to be generated at the district and state level. No standards or curriculum can achieve change in the classroom by itself. The “taught curriculum” even now differs dramatically from the written curriculum and standards. To achieve change in the classroom, many issues must be addressed. Among these are curriculum writing, professional development for science teachers, coordination with teacher training programs, buying and upgrading science supplies and equipment.

The writers of NGSS included recognition of the massive systemic culture change necessary to successfully implement broad changes in actual science classroom practice. They cited the challenges for teachers posed by students who vary widely in demographic background, language ability, level of preparation, work habits, parental expectations, etc. Teachers will need a level of support considerably higher than that which now exists in order to embrace and faithfully implement NGSS.

CESE recommends the adoption of NGSS. Our organization of scientists, engineers, teachers, statisticians, curriculum writers, and concerned citizens stands ready to assist in any way we can to see that the rollout of these world-class standards is successful.

Sincerely,

Terry Dunbar, Ph.D.  
President, CESE