NGSS: Myths and Facts

Myth	Fact
In the proposed adoption of CA NGSS only middle school is integrated.	The proposed adoption includes performance expectations (PEs) in life, earth, physical science and engineering each year K-8; high school PEs may be arranged as discipline specific or integrated courses.
CA should have a grade span arrangement of the PEs for middle school like they are suggesting for high school.	CA is a K-8 instructional materials adoption state, MANDATING that standards be assigned to each grade level, K-8.
Currently CA's middle school science is discipline specific.	Each grade has an EMPHASIS on one discipline, with standards from the other two disciplines. For example, in 6th grade the emphasis is on earth science, but also includes standards that address thermal energy from physical science and ecology from life science.
The arrangement of the PEs in the proposed CA middle school do not align with NGSS.	NGSS is arranged by Disciplinary Core Ideas (DCI) and by topics (performance expectations that are bundled to address a science topic). The recommended CA middle school arrangement is built from the topic arrangement suggested by NGSS. Additionally, the CA arrangement will be included as a model by NGSS for other states to use at the middle school level.
If CA adopts its own arrangement of PEs for middle school it will not match what the rest of the country is adopting.	States that adopt NGSS will have a choice as to how they assign PEs at the middle grades. Nationally, one-third of the states have discipline specific content at middle school; one-third of the states have an integrated model; and one-third of the states have local choice as to what is taught when. Therefore there is little possibility of any state "matching" the arrangement of PEs at a SPECIFIC grade level. What does match are the PEs for the 6-8 grade span. By the end of 8th grade all

	students should have had the same science performance expectations.
You will need a new credential to teach integrated middle school.	Middle school science is considered general or introductory science. You can teach middle school science with a multi-subject credential (with the appropriate subject matter authorization) or any single subject science credential.
If science is integrated, few teachers will have the content expertise in all of the disciplines.	The myth is partially true. However, a goal of NGSS as stated by Dr. Bruce Alberts is, "The [final product's] strong emphasis in the NGSS on cross-cutting concepts and on active learning has been enforced by mixing standards for the different sciences (and engineering) in each year of middle school. Thus, the students will reinforce what they learned the previous year, returning to related ideas, and the focus in every year will be on SCIENCE ITSELF, not biology, or earth sciences, or the physical sciences." With this goal in mind, strong professional development is needed for all teachers. Additionally, middle school departments have the freedom to think strategically about scheduling and collaborating to maximize the talents of their staff.
Implementation of NGSS just means tweaking how we currently teach science	The vision of NGSS is that science education focuses on "knowledge in use." Currently, the CA standards focus on knowledge. In order to maximize the vision of NGSS, teaching science must include interweaving of the 3 components: science and engineering practices, disciplinary core ideas, and cross cutting concepts. For this reason, a transformation of current instructional practices is needed to reflect the NGSS vision.
Science assessment is going away.	Assessment to meet NCLB will continue at grades 5, 8 and 10 until federal requirements are revised or changed. In

	2014, the science CST will address the CA standards as they currently are: in grades 5, 8 and 10. At this time, it is uncertain as to what science assessment will look like in 2015 and beyond. However, if NGSS are adopted, CDE has 6 months to recommend a suitable type of science assessment. Currently the assessment division is looking at computer-based assessment that more closely matches NAEP and PISA, i.e., includes performance tasks and not just multiple choice assessment items.
There will be a Smarter Balance Assessment for Science.	Currently, there is NO national assessment for science. However, a National Research Council committee is discussing a framework for science assessment, with the potential for a national assessment system. A report will be released in early fall. If a national assessment is produced, CA would decide if they want to be part of this assessment system.
A national 8th grade test will only assess one discipline.	If a national 8th grade test is developed it would likely assess ALL 6th-8th grade PEs.
CA science teachers will implement NGSS immediately upon adoption.	The timeline for implementation of standards, once adopted, is a local decision. However, based on the current timeline for the development of the CA NGSS framework, assessments, and instructional materials adoption process, we don't anticipate full implementation of the NGSS until 2015-16 at the EARLIEST.
Teachers will be expected to implement NGSS without support.	The science education community stands ready to assist teachers in implementation. Organizations like the California Science Teachers Association, the California Science Project and the K-12 Alliance, as well as science informals (e.g., museums) and the business

	community are seeking ways to assist in the transition and full implementation to NGSS in anticipation of teachers' needs.
My district says we have to start now to implement NGSS.	The changes for science education required by NGSS are significant. It will take time to implement with fidelity the vision of NGSS. In the next 1-2 years, even NGSS is suggesting that states and districts think strategically about how to best move forward their implementation efforts. The California Department of Education, in conjunction with a variety of partners is developing a strategic implementation plan for NGSS. This plan should be available by the end of this school year (Spring 2014). In the meantime, a good place to start implementing the vision of NGSS is with the science and engineering practices and with engineering performance expectations or with the cross-cutting concepts.
There are Common Core Science Standards.	Common Core addresses literacy in science, NOT science content. Science content is only found in NGSS. However, NGSS is aligned with CCSS in ELA and mathematics. CA used this alignment to place PEs at certain grade levels. For example space science is at 8th grade due to the alignment with CCSS-mathematics.