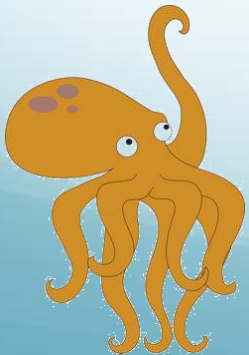


Changes in K-12 Standards and Potential Impacts in CCC Classrooms

Dianna Chiabotti, Napa Valley College
Carolyn Holcroft, Biology, Foothill College
ASCCC Spring Plenary 2013

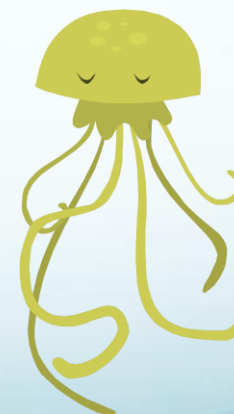


Common Core State Standards (CCSS)

- Not “state,” but national standards for K-12 in English Language Arts (ELA) & Mathematics
- Adopted by California Legislature in 2010, implementation occurring now
- Assessments to begin in 2015
- <http://www.corestandards.org/the-standards/download-the-standards>

Big Picture

- **CCSS place greater emphasis on...**
 - **collaboration and teamwork**
 - **fluency with multimedia and technology**
 - **real-world problem solving, everyday application**
 - **communication skills**
 - **application of skill across disciplines**



Emphasis on “standards for mathematical practice”

- M1. Make sense of problems and persevere in solving them.
- M2. Reason abstractly and quantitatively.
- M3. Construct viable arguments and critique the reasoning of others.
- M4. Model with mathematics.
- M5. Use appropriate tools strategically.
- M6. Attend to precision.
- M7. Look for and make use of structure.
- M8. Look for and express regularity in repeated reasoning.

Definition of College Readiness

- Students who perform at the College Content Ready level in **mathematics** demonstrate foundational mathematical knowledge and quantitative reasoning skills necessary for introductory courses in a variety of disciplines. They also demonstrate subject-area knowledge and skills associated with readiness for entry-level, transferable, credit-bearing mathematics and statistics courses.

Standards for ELA capacities

- E1. Demonstrate independence.
- E2. Build strong content knowledge.
- E3. Respond to varying demands of audience, task, purpose & discipline.
- E4. Comprehend as well as critique.
- E5. Value evidence.
- E6. Use technology and digital media strategically & capably.
- E7. Come to an understanding of other perspectives & cultures.

Definition of College Readiness (ELA)

- Students who perform at the college content-readiness level demonstrate reading, writing, listening, and research skills necessary for introductory courses in a variety of disciplines. They also demonstrate subject-area knowledge and skills associated with readiness for entry-level, transferable, credit-bearing English and composition courses.

Smarter Balanced Assessment Consortium (SBAC)

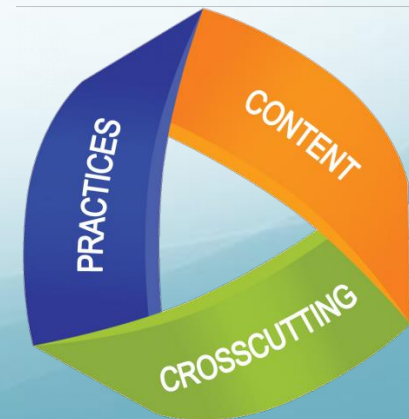
- Two consortia developing assessment systems aligned with CCSS - California is in SBAC
- Higher Ed faculty asked to participate in defining college readiness and determining necessary skill levels for success in college
- <http://www.smarterbalanced.org/higher-education/>

Assessment

- How?
 - Computer Adaptive Testing: adjusts to performance
 - Performance Tasks: scenario-based, cohere around single theme or real-world problem, rely on research, problem solving skills, transfer of knowledge skills
 - Sample items: <http://www.smarterbalanced.org/sample-items-and-performance-tasks/>
- When?
 - Optional interim assessments
 - Mandatory summative – given in last 12 weeks of year
 - Each year in grades 3-8, and year 11
- Results in days/weeks rather than months
 - Time for student to modify enrollment for next term

First step to development of Next Generation Science Standards (NGSS)

1. Identify the science all K-12 students need to know: *Framework for K-12 Science Education* developed by the National Research Council (July 2011)
 - **Practices**: behaviors that scientists engage in
 - **Crosscutting concepts**: application across all scientific disciplines (e.g. patterns, diversity, systems and system models, etc.)
 - **Disciplinary Core Ideas**: physical sciences, life sciences, earth and space sciences, engineering, technology and applications of science



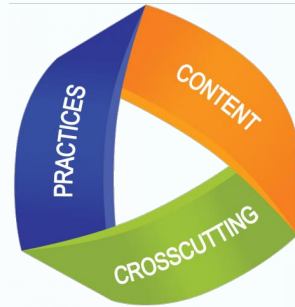
Second step in development of NGSS

2. State-led collaboration to develop the NGSS

- Included stakeholders in science, science education, higher ed, and industry
- Writing team reviewed feedback and made revisions, final NGSS released in April 2013 – visit <http://www.nextgenscience.org/next-generation-science-standards>

GOAL: College and career-ready students

How are the NGSS different?



- Meant to reflect real-world interconnections in science (merge behaviors, applications, and facts rather than teach/assess separately)
 - Focus on integration of knowledge and practice
 - Help educators shift pedagogical approach from separate fragments to integrated approach
- Focus on deeper understanding and application of content , CORE IDEAS central to disciplines, rather than associated FACTS
- Science concepts build coherently across K-12
 - Sustained opportunities to develop understanding and appreciate connections over YEARS instead of weeks/months
 - Provide ongoing opportunities to deepen understanding by applying science knowledge to solution of practical problems in everyday life

How are the NGSS different?

- Focus on deeper understanding and application of content , CORE IDEAS central to disciplines, rather than associated FACTS

E.g. Physical sciences

- Matter and interactions
- Motion and stability: forces and interactions
- Energy
- Waves and their applications in technologies for information transfer (stress on interplay of science and technology)

How are the NGSS different?

- Science and engineering (& technology) are integrated in science education across K-12
- Give core ideas of engineering and technology the same status as other science disciplines
- Provide ongoing opportunities to deepen understanding by applying science knowledge to solution of practical problems in everyday life

- Science standards coordinate with ELA and Math CCSS
 - E.g. teaching language and math concepts within the context of science
- <http://www.nextgenscience.org/sites/ngss/files/Appendix%20A%20-%20Conceptual%20Shifts%20in%20the%20Next%20Generation%20Science%20Standards%20-%20FINAL.pdf>

**What Does This Mean
for Future Students
Attending Community
Colleges?**

What Does This Mean for Our Preparation of Future Teachers?

**Will GE Courses and the
GE Program Be
Affected By This New
Approach to Learning
ELA, Mathematics and
Science?**

**Should we consider
changing content,
methodology or
instructional delivery
of our courses?**

Thanks!

- Carolyn Holcroft (holcroftcarolyn@foothill.edu)
- Dianna Chiabotti (dchiabotti@napavalley.edu)

Answers, and Resources to Address Questions Raised in the Breakout...

- If students meet the 11th grade standards, won't they be much less motivated to enroll in math in the 12th grade?
 - Students will be considered ready for college level English and math ONLY if they successfully complete approved English and math during their senior year.
 - For more info about how CSU is planning implementation, see <http://www.calstate.edu/AcadAff/Presentations/docs/BOT%20Jan%202013%20Ed%20Pol%204%20EAP%20%20v.2.pdf>
- How can CCC faculty get more information, receive news and voice concerns about remediation/placement into our math/ELA courses?
 - Visit <http://www.cde.ca.gov/re/cc/> and:
 - sign up for the “Resources Listserv”
 - Check out the Implementation Plan for CA: <http://www.cde.ca.gov/re/cc/documents/ccssimpsysplanforcaoct2012.doc>
- Is the EAP going away?
 - No! The assessment portion of the EAP will change.
 - <http://www.asccc.org/content/embracing-and-implementing-new-k-12-standards-english-mathematics-and-science>
- Still have questions? Contact Carolyn Holcroft at holcrofcarolyn@fhda.edu