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

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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
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/](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

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!

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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%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”

- 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 holcroftcarolyn@fhda.edu