CISC Meeting

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Professional Learning Support Division
November 14, 2013
Next Generation Science Standards

Setting a New Course
California to Revise Science Standards

- SB 300
- SB 1200
- Revise CA Science Standards based on NGSS
- Submit to SBE July 2013
- SBE to act by November 2013
State Board of Education
September 2013 Decision

• In September 2013, the State Board of Education (SBE) unanimously adopted NGSS as California's Science Standards for Grades Kindergarten through Grade Twelve.

• This decision included;
  – Grade specific standards in grades K-5
  – Grade span standards in grades 6-8
  – Grade span standards in grades 9-12.
  – And the NGSS Appendices A-M

• The decision allowed the SBE to meet the timeline for adoption of new standards.
To complete the SBE process

- At the July and September 2013 Board meeting, the SBE reviewed the Science Expert Panel’s recommendation of an Integrated Model for grades 6-8.

- At the September 2013 meeting, the SBE agreed to defer this decision to November and asked the Department to gather more input on the proposed integrated learning progression model for grades 6-8.
Department’s Outreach Efforts Since September

– ACSA
– CSU East Bay, Alameda COE
– Los Angeles Unified School District
– Modesto City Schools
– Two NGSS 101 Sessions at CSTA
– NGSS middle school conversation at CSTA
– Hosted a Webinar
– On-line Implementation Survey
Feedback from Science Educators

- Educators all along have been supportive of the middle school arrangement and are eager to begin implementation.
- Educators, after receiving more information and deepening their understanding of the thinking behind the integrated arrangement, are now ready to implement.
- Educators were concerned about the integrated model due to;
  - Lack resources
  - Lack of capacity to implement or teacher expertise in all science disciplines.
SBE

November 2013 Decision

The SBE unanimously adopted;

• The proposed integrated learning progression model as the preferred model of instruction for grades 6-8.

and

• authorized an alternative model that is discipline specific for grades 6-8.
Reminder

Standards are a list of what should be learned at each of the grade levels.

- How they are “bundled” for curriculum purposes and instruction is a local decision.
Preferred Integrated Model

- Contains Standards for Life Earth and Space, and Physical sciences in each grade 6\textsuperscript{th}, 7\textsuperscript{th}, and 8\textsuperscript{th}.
- Is aligned with the cognitive demands of the California Common Core State Standards.
- Builds within and across the grade levels.
- Provides for the integration of the engineering processes.
Articulation One Example

Life Science

- 8th Natural Selection
- 7th Ecosystems
- 6th Cells/Organisms
- 5th Food Chains/Webs
- 4th Internal and External Structures/Functions
Example Integration 7th Grade

- Ecosystems; photosynthesis
- Natural resources; rocks and minerals
- Chemical properties and reactions

Matter cycles; energy flows

Cause and effect

Engineering and Human Impact
Alternative Discipline Specific Model

• Must align with the cognitive demands of the Common Core
• Is to be based upon the adopted NGSS Appendix K.
• Will be developed by the SEP
California Science Expert Panel (SEP)

- 27 Science Experts who are representative of the SRT
  - K-12 Teachers, COE Science Leaders, IHE Faculty, Business, Industry, and Informal Science Centers
  - Noted Scientist Advisors
    - Dr. Bruce Alberts
    - Dr. Helen Quinn
    - Dr. Art Sussman
  - SBE Liaisons
    - Trish Williams
    - Ilene Strauss
Discovery consists of seeing what everybody has seen -- and thinking what nobody has thought.
Questions?

Thank you.