Public Input on Science Standards

Presented at Regional Community Meetings across Wyoming May – June 2015

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Science Standards Review
Process & Committee Design

Presented at Regional Community Meetings across Wyoming May 2015

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Welcome and Introductions

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Standards Review Authority

• Pursuant to W.S. §21-2-304(a)(iii), the Wyoming State Board of Education must prescribe uniform student content and performance standards for the common core of knowledge specified by W.S. §21-9-101(b)(i).

• The Wyoming Content and Performance Standards must be reviewed every nine (9) years per W.S. §21-2-304(c).
Content Committee Selection

- Number of members (40-44)
- Structure of Committees
  - Content Area Considerations (Science, STEM)
  - Ensure diversity of Content Committees
    - Large school / Small school
    - Veteran / Rookie Educators
    - All corners of the state + central
    - Grade levels – alignment through the years (K-12)
  - Content Experts
    - School District Personnel
    - University and Community College Personnel
  - Wyoming Citizens
    - Parents
    - Business & Industry Members
    - Retired, Grandparents, Community Members
## Standards Review Committee Selection

<table>
<thead>
<tr>
<th>Members</th>
<th>Grade Band Sub-Committee</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 - 4</td>
<td>Grade Level Content Teachers</td>
</tr>
<tr>
<td>1</td>
<td>Lower Grade Level Content Teacher</td>
</tr>
<tr>
<td>1</td>
<td>Upper Grade Level Content Teacher</td>
</tr>
<tr>
<td>1</td>
<td>EL Teacher (English Learners)</td>
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<tr>
<td>1</td>
<td>Special Education Teacher</td>
</tr>
<tr>
<td>1</td>
<td>District Person – Principal, CD, IF, Superintendent</td>
</tr>
<tr>
<td>1</td>
<td>Other Relevant Content Area (e.g. Career / Vocational Ed. Teacher, Science Teacher)</td>
</tr>
<tr>
<td>1</td>
<td>Business &amp; Industry Representative</td>
</tr>
<tr>
<td>1</td>
<td>Higher Education Content Professor (UW, CCs)</td>
</tr>
<tr>
<td>1-2</td>
<td>Parent</td>
</tr>
<tr>
<td>1 / large committee</td>
<td>Student (possibly HS or recent graduate)</td>
</tr>
</tbody>
</table>
Standards Review - Roles

• WDE Consultants
  – Facilitate & Communicate

• Content Committees
  – Revise Content Standards
  – Keep Standards Consistent Across the Grade Bands
  – Make Recommendations to the State Board of Education
Standards Review Process – Goals & Objectives

- Review the Current Content Standards (WyCPS)
- Consider any Revisions (Applying up-to-date Research)
- Consider Aligning/Integrating to other Wyoming Content Standards (WyCPS) (e.g. math, ELA, C&VE)
- Consider any National Content Standards
- Consider Other Exemplary States’ Standards
Standards Committee Options

1. Keep the Current (2008) Wyoming Science Content & Performance Standards (WyCPS) as is
2. Revise the Current WyCPS for Science
3. Adopt an already created set of Science Standards (nationally or another state’s)
4. Revise/borrow from other created Science Standards
5. Create a set of Science Standards from multiple documents
6. Create a brand new set of Science Standards
Purpose of the Wyoming Content and Performance Standards

1. The Wyoming Content and Performance Standards will include the knowledge and skills necessary for student success in college and career.

Overall Criteria

2. The Wyoming Content and Performance Standards should be uniform in structure within each content area.

3. Each content area will be prefaced with a content-specific rationale.

4. The Wyoming Content and Performance Standards will be structured at the standard and benchmark levels only, but groups of benchmarks can be organized into several categories.

5. The Wyoming Content and Performance Standards will include performance level descriptors that describe what advanced, proficient, basic, and below basic performance levels look like. (except for the content areas currently assessed under the statewide assessment system [PAWS])

6. The Wyoming Content and Performance Standards and benchmarks will be knowledge and skill expectations rather than activities.

7. The grain size of the benchmarks will be neither too small nor too large. For example the grain size may be too large with one benchmark per standard or too small with twenty-three.

8. The benchmarks in the Wyoming Content and Performance Standards in each content area will reflect the full range of cognitive and psychomotor levels or depth appropriate to the content area and grade level.
Design Criteria (cont.)

**Knowledge and Skills**

9. The entire common core of knowledge, as specified in W.S.21-9-101(b)(i), will be reflected in the set of standards.

10. The entire common core of skills, as specified in W.S.21-9-101(b)(iii), will be integrated into the Wyoming Content and Performance Standards and benchmarks in each content area.

11. The purposeful integration of technology, to include the International Society for Technology in Education (ISTE) National Educational Technology Standards for Students, will be integrated into standards and benchmarks in each content area.

**Grade-level and Graduation**

12. The Wyoming Content and Performance Standards will define what students are expected to know and be able to do in each content area by the time they graduate.

13. The Wyoming Content and Performance Standards will represent a progression of knowledge and skills across grade levels.

**Clarity**

14. The Wyoming Content and Performance Standards will be understandable by students, parents, educators, and other Wyoming stakeholders.

**Measurability**

15. The benchmarks in the Wyoming Content and Performance Standards will serve as the basis for formative, interim, and summative assessment of student learning.
Definitions
for Standards Review Process
Standards Review – Definitions

• **Content Standards**
  – what students are expected to know and be able to do by the time they graduate
  – do not dictate methodology, instructional materials, or delivery

• **Benchmarks** (expectations)
  – skills and content knowledge students must master along the way in order to reach the content standards by the time they graduate
Benchmarks – Grain Size

• Is the “grain size” of the benchmarks appropriate? Do the benchmarks describe content not so narrowly that it could be mastered by a student in an afternoon, but not so broadly that it might take several months of instruction?

• A benchmark should be specific enough that readers are clear about the instruction and learning it should entail, but neither so narrow as to prescribe the day-to-day curriculum, nor so broad that the knowledge and skills it describes could be open to numerous equally valid interpretations.
Standards Review - Timeline

Standards Review / Revision Starts
June 15-16, 2015
Casper, WY

Content Committee Meetings
Summer 2015
Fall 2015

Standards Formatting and Finalizing

Public Comment Period & Hearings - 45 days minimum

Standards Presented to the State Board of Education

If approved, Standards Sent to the Governor for Signature - has 75 days to review
Questions on Standards Review Process
Public Input on Science Standards

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May – June 2015

YouTube: Why Excellent Science Standards Are Important