



**WYOMING**  
DEPARTMENT OF EDUCATION

*Creating Opportunities  
for Students to Keep  
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# 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).

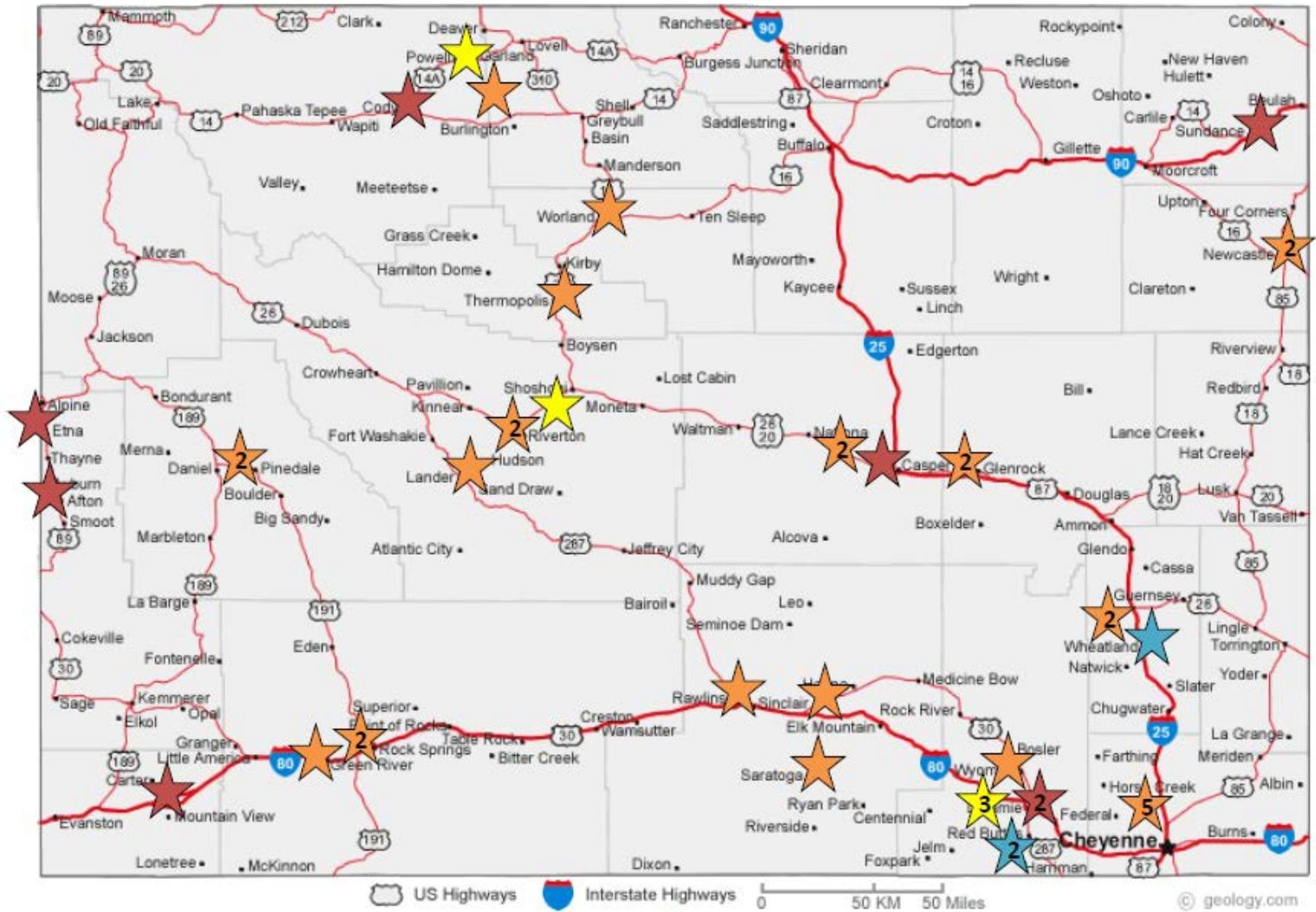
# Content Committee Selection

- 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

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

# Map of 2015 Science Standards Review Committee



**8** Parent

**5** Professor

**28** Educator

**3** Community Member/  
Business Owner

# 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

# Design Criteria

## 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.**

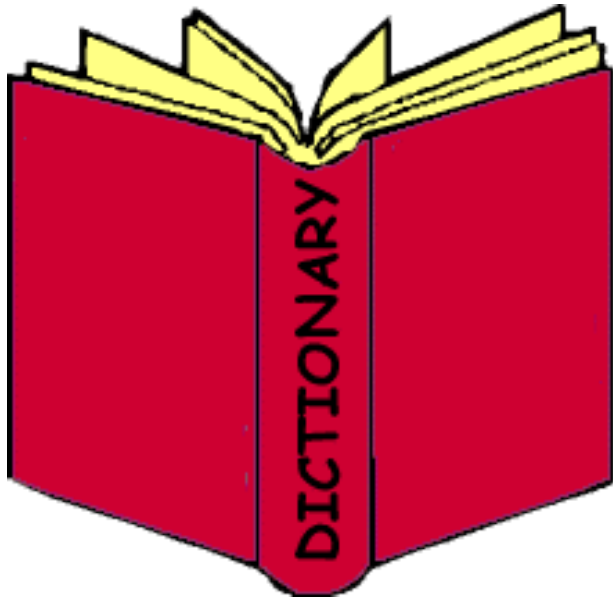
## Clarity

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



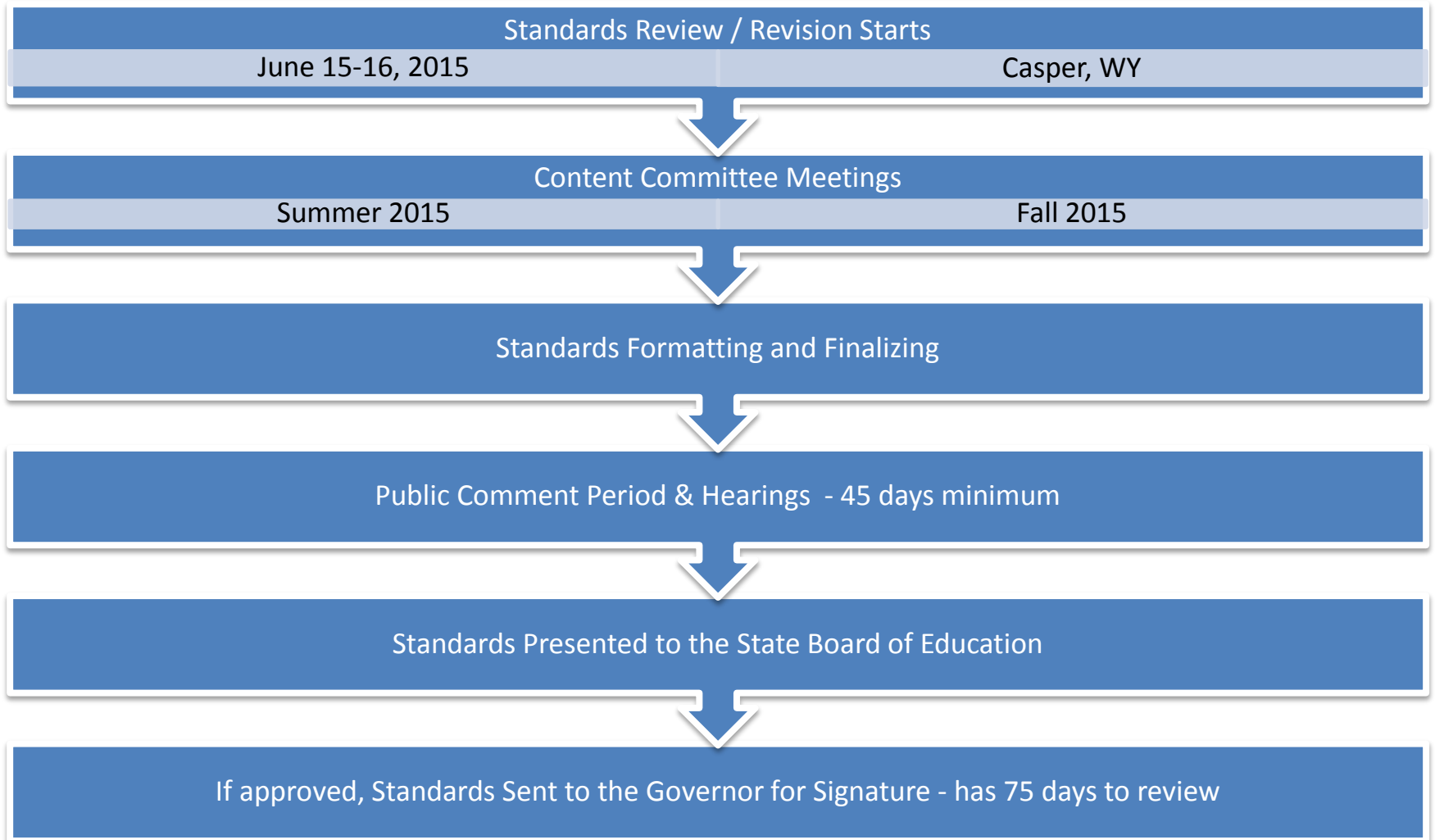
# Standards Review – Definitions

- **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





# Questions on Standards Review Process





*Explore The Possibilities*



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[YouTube: Why Excellent Science  
Standards Are Important](#)



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