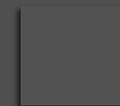


Louisiana Science Standards Review

Workgroups Meeting – August 31-September 1, 2016



Workgroup Schedule

August 31st

- Set vision
- Identify framework components
- Determine baseline standards to utilize

September 1st

- Identify criteria of quality core content
- Analyze language impact
- Practice revising standards
- Begin drafting standards
- Closing logistics

Vision Setting

- 1 Reflect upon what teaching and learning looks like in an ideal science classroom.
- 2 As a table, share out your individual visions. On post-it notes, write common adjectives, phrases, or sentences that represent your ideal scenario.
- 3 Post the notes at the designated area and discuss the commonalities and differences as a group.
- 4 As a group, define 4-6 ways the review and development of the standards should encourage optimal teaching and learning in Louisiana classrooms.

Framework Components

Before beginning to draft standards, these committees will consider which framework, or underlying structure, and components of the standards will serve as the foundation of the standards and help organize the developed content.

Framework Components

Rotate to the following tables to explore examples of the framework components in standards from other states. At each table, discuss how the inclusion of the specific component impacted the standards and how the standards would be different without that specific component.

- Science & engineering practices
- Cross-cutting concepts
- Disciplinary core ideas and performance expectations
- Engineering performance expectations
- Clarification statements
- Connections to the nature of science
- Connections to Louisiana Student Standards for math and ELA

As you complete each rotation, place a green or red sticker on the chart paper. As needed, use the guiding questions on the worksheet to help you make the decision. Green indicates you think that component should be included in the framework of the Louisiana Student Standards. Red indicates it should not be included. This will provide a basis for an initial workgroup proposal.

Framework Components

As a group, consider which framework components to include in the Louisiana Student Standards.

- Science & engineering practices
- Cross-cutting concepts
- Disciplinary (core ideas) performance expectations
- Engineering performance expectations
- Clarification statements
- Connections to the nature of science
- Connections to Louisiana Student Standards for math and ELA
- Other?

Starting Point Determination

To begin drafting Louisiana student science standards, workgroups need a set or sets of standards to use as a baseline. This does not mean they can not be changed or adjusted, but rather will help guide the work. Discuss with your table what state(s) should serve as the baseline standards for this work.

As a table, propose which 1 or 2 states should be used and the rationale for the choice.

As a group, share out which states should be included in the working spreadsheet.

Guiding questions:

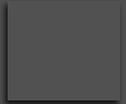
- Which state(s) set rigorous, research-based, represent the knowledge and skills needed for students to successfully transition to postsecondary education and the workplace, and are clear standards for students?
- Which state(s) include the framework components that will be included in the Louisiana student standards?
- Which state(s) seem to be the most accessible for educators?

September 1 Logistics

- Tomorrow's meeting will begin at 9am in the library at Pineville High School.
- Next Steps:
 - If you do not have a Google account, create one tonight. Send an email to LouisianaStandards@la.gov from that email address. Title the email with your name. If you need help doing this, stay after the meeting and we will help you.
 - If you do have a Google account, send an email to LouisianaStandards@la.gov from that email address. Title the email with your name.

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Indicators of Quality Standards

It is important to evaluate the core content that is included in the standards strategically and consistently to ensure that the final product is rigorous and coherent. To do this, a set of criteria need to be considered for consistency across grade levels.

- As a table, analyze the criteria for quality on the Standards Analysis Worksheet.
- Consider:
 - Which criteria should be included?
 - Which criteria should not be included?
 - Which criteria should be edited?
 - Should any other criteria should be added?
- Consider as a table and determine edits that need to be made to the set of criteria. Discuss and edit as a whole group.

Language Analysis

The specific language of a standard can significantly impact classroom instruction. Discuss with your table how the language choices in the following standards influences how teachers teach and what students learn. Record your thoughts on chart paper.

Standard 1	Standard 2
Conduct an experiment to determine whether the mixing of two or more substances results in new substances with new properties (a chemical reaction) or not (a mixture).	Conduct an investigation to determine whether the mixing of two or more substances results in new substances.
Use evidence to support the claim that gravitational forces between objects are attractive and are only noticeable when one or both of the objects have a very large mass.	Construct and present arguments using evidence to support the claim that gravitational interactions are attractive and depend on the masses of interacting objects.
Evaluate the merit of a design solution that reduces the damage caused by weather.	Make a claim about the merit of a design solution that reduces the impacts of a weather related hazard.

Draft Standards

Consider previous discussions about:

1. What standards do (slide 16 from committee meeting; repeated on slide 14 in this presentation),
2. Criteria for quality standards (determined in the first activity today),
3. And the impact of language on a standard (discussed in the previous activity).

Using the sample spreadsheet, independently practice reviewing and editing the standard to convert it to a quality Louisiana Student Standard.

Then, break into grade band groups (K-5, 6-8, HS) and discuss your proposed revisions.

Overview of the Louisiana Student Standards

Standards Do	Standards Do Not
1. Identify key knowledge and skills that <i>students</i> should demonstrate by the end of the year	<ul style="list-style-type: none">• Focus on <i>teacher</i> actions or what <i>teachers</i> should do to teach that content• Require specific instructional strategies, approaches, curricula or text to be used (“e.g.” or “such as” indicate an example, not a requirement)• Omit critical content
2. Connect learning within and across grade levels	<ul style="list-style-type: none">• Include unnecessarily repetitive standards• Create contradictions within a grade or with standards in other grades• Create gaps in the progression of learning within or across grades
3. Use clear language that clarifies for educators what students should be able to do at the end of a particular grade.	<ul style="list-style-type: none">• Use ambiguous or vague language

Grade Band Discussion

As a grade band group, discuss the following:

- What parts of this process seem clear?
- What parts of this process do you still have questions about?
- Is there anything specific to your grade band that needs to be discussed before beginning to draft the standards?

Lunch

Draft Standards

- As a group, practice using the Google Sheet and the printed state standards to draft a Louisiana standard.
- Break into grade level and content group teams. Begin drafting the Louisiana Student Science Standards.

Next Steps

- The next workgroup meeting is September 12-13 in Alexandria.
- Pre-work:
 - Complete grade level or content draft of the Louisiana Student Science Standards as a group by Thursday, September 8.
- The logistics survey and event memo will be sent by Friday, September 2.

Thank You