

Louisiana Standards Review

August 19, 2015

Welcome

- **Committee members**
- **Educators, parents and interested stakeholders**
- **Department of Education and BESE staff**
- **Elected officials**



Agenda

- ▶ Welcome
- ▶ Overview of standards review process and standards
 - ▶ Standards review process
 - ▶ English language arts standards
 - ▶ Math standards
- ▶ Summary of public feedback from online review portal
- ▶ Public comment
- ▶ Lunch – BREAK
- ▶ Content sub-committee meetings
 - ▶ Overview of review and committee feedback processes
 - ▶ Committee next steps
 - ▶ Public comment



Overview of Standards Review Process and Purpose



Meeting Procedures

- ▶ **Public meetings:** All meetings will be advertised, will be open to the public, and will be held pursuant to the Louisiana Open Meetings Law.
- ▶ **Public comment at meetings:** Public comment will be received during each meeting and prior to any votes. Members of the public may also submit written comments for the record.
- ▶ **Working Groups:** We will work collaboratively through this work, we expect active participation and discussion throughout the process.
- ▶ **Content of public comment:** All public comment must relate to the review and development of standards, not other matters of policy.
- ▶ **Committee leadership:** Each committee and subcommittee will be facilitated by a chairman.
- ▶ **Voting:** Subcommittee members will work together to finalize any recommended revisions or additions to standards. Votes will then be taken as a slate, not by individual standard or edit, to move proposed standards forward to the committee and to BESE.
- ▶ **Voting proxies:** No proxies will be allowed for voting purposes. Participants must be in attendance to vote.
- ▶ **Legislative liaisons:** Appointed legislative liaisons will attend all meetings and report back to the Legislature.
- ▶ **Minutes:** Minutes from each meeting will be submitted to the legislature and videos, where available, will be posted to the LDE's website.

Louisiana State Standards

- ▶ Louisiana state law requires BESE to adopt academic content standards, which are defined in the law as statements that define what a student should know or be able to accomplish at the end of a specific time period or grade level or at the completion of a course.
- ▶ Standards are different than curricula, textbooks, and other instructional materials, which support the teaching and learning of the standards. State law and BESE policy provide for the selection of these materials by local school systems.
- ▶ The law sets forth an expectation that standards be rigorous and that they represent the knowledge and skills needed for students to successfully transition to postsecondary education and the workplace, as determined by content experts, elementary and secondary educators and school leaders, postsecondary education leaders, and business and industry leaders.
- ▶ This review process involves these and other critical stakeholders, and it aims to ensure that Louisiana standards achieve the above goals of supporting students' academic progression and post-secondary success.

Directives from BESE & the Legislature

In April, BESE required the Department to commence the next scheduled review of state academic content standards in English language arts and mathematics, as required in Bulletin 741, §2301(C).

In June, the Legislature, through [Act 329 of 2015](#), called on BESE to move ahead with these additions:

The state Department of Education, with the approval of the State Board of Elementary and Secondary Education, shall develop and establish statewide state content standards for required subjects to be taught in the public elementary and secondary schools of this state.

State content standards for English language arts and mathematics shall be reviewed and developed as follows:

- (a) Not later than July 1, 2015, the State Board of Elementary and Secondary Education shall begin reviewing and developing state content standards in English language arts and mathematics.*
 - (b) The board shall hold at least one meeting for such purpose in each Louisiana congressional district.*
 - (c) The board shall submit the minutes from each meeting held pursuant to this Paragraph to each member of the legislature not later than thirty days after the meeting.*
 - (d) All meetings held by the board for the review and development of the standards shall be subject to the Open Meetings Law.*
 - (e) The board shall post the standards on its website not later than February 21, 2016, and shall adopt the standards not later than March 4, 2016.*
 - (f) The board shall promulgate the standards in accordance with the Administrative Procedure Act prior to implementation of the standards.*
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Standards Committees

- ▶ In accordance with state law, this review process will be led by content experts, elementary and secondary educators and school leaders, postsecondary education leaders, and business and industry leaders. BESE has also provided for extensive participation by parents of Louisiana school children and the general public, both through the online review portal and in standards review committee meetings.
- ▶ BESE solicited nominations statewide from several education associations, local school systems, and key stakeholder organizations representing parents and business and industry leaders. From these nominations, the board assembled a diverse group of 101 individuals representing every sector mentioned in the law, as well as every geographic region of the state.
- ▶ These volunteers will serve on a standards review committee and three content sub-committees, each led by a designated chairperson.

Standards Committees & Participation

Standards Committee
26 members
Guide process and updates
Make final recommendation to BESE

Standards
Committee

2015-2016 Cycle Only
29 members each
Review public comments
Propose content recommendations
Each subcommittee is represented on the Standards Committee

K-2 Content
Subcommittee

3-12 ELA
Content
Subcommittee

3-12 Math
Content
Subcommittee

Standards Committee Members

Seat	Name	District/Organization	Current Role
K-2 Committee	Anne Smith*	Vernon	Curriculum Director
K-2 Committee	Aeneid Mason*	Zachary	Director of Special Education Services
K-2 Committee	Kim Shackelford*	Lincoln	Coordinator of State and Federal Program
ELA Committee	Regina Sanford*	St. Tammany	Assistant Superintendent of Curriculum and Instruction
ELA Committee	Jawan Alexander*	New Orleans	Assistant Head of School
ELA Committee	Zanovia Curtis*	West Feliciana	District Instructional Coach
Math Committee	Charlotte Boothe*	Rapides	Middle School Curriculum Specialist
Math Committee	Tammy Hall*	Bossier	High School Teacher
Math Committee	Sheldon Jones	Richland	Superintendent
Louisiana Association of Educators	Suzette Riddle	Vermilion	Elementary Educator
Louisiana Federation of Teachers (LFT)	Steve Monaghan	LFT	President
A+PEL	Angelle Lailhengue	St. Bernard	Teacher
University (Math)	Frank Neubrandner*	Louisiana State University	Department of Mathematics
LA Assn of Teachers of Mathematics (LATM) & LA Council of Supervisors of Math (LCSM)	Penny Gennuso	Lafayette	K-12 Math and Science Academic Specialist
University (English)	Lisa Rougeou	Northwestern	Writing Project Director and Instructor
Louisiana Reading Association (LRA)	Debbie Rickards*	LRA	Retired Teacher and Curriculum Coordinator
Louisiana Early Childhood Association (LAECA)	Michelle Joubert	LAECA	President
Board of Regents (BOR)	Jeanne Burns	BOR	Associate Commissioner of Teacher and Leadership Initiatives
Louisiana Parent Teacher Association (PTA)	Chad Aucoin	PTA	St. Charles, PTA
Black Alliance for Educational Options (BAEO)	Dr. RaeNell Houston	BAEO	Parent
Urban League	Arielle McConduit	Urban League	Parent
Louisiana Association of Principals (LAP)	Dedra Bailey	St. Bernard	Principal
Louisiana Assn of School Supts (LASS)	Hollis Milton	West Feliciana	Superintendent
Louisiana School Board Association (LSBA)	Scott M. Richard	LSBA	Executive Director
Louisiana Assn of Public Charter Schools	Kathy Riedlinger	LAPCS	CEO, Lusher Charter School
Louisiana Assn of Business and Industry (LABI)	Keith Leger	LABI	Program Manager

*Member also sits on a content committee

2015-2016 Content Subcommittees

For the current review process (2015-2016), three content subcommittees will review each set of standards in depth.

- ▶ K-2 Content Subcommittee
- ▶ 3-12 ELA Content Subcommittee
- ▶ 3-12 Math Content Subcommittee

Each content subcommittee will propose a set of standards to the Standards Committee for consideration.

Seventy five percent of each content subcommittee are current, district and school-based educators.



K-2 Content Subcommittee Members

Position	Name	District/Org	Role
K Educator	Michelle Abadie	St. Bernard	K-2 Teacher
K Educator	Karen Parrino	Livingston	K-2 Teacher
K Educator	Denean Trigs-Keys	St. Tammany	Literacy Coach K-3
K Educator	Jenny Kelly	St. John the Baptist	K-2 Teacher
K Educator	Misti Segura	East Baton Rouge	K-12 ELA Assessment Specialist
K Educator	Lacey Richey Fontenot	Calcasieu	K-2 Teacher
Grade 1 Educator	Travis Durling	Iberville	K-2 Teacher
Grade 1 Educator	Joan Rhodes	Richland	K-2 School-Based Coach
Grade 1 Educator	Crystal Legnon	Iberia	K-2 Teacher
Grade 1 Educator	Shawri Landry	Vermilion	Curriculum Facilitator
Grade 1 Educator	Fara Seal	Calcasieu	K-3 Teacher
Grade 1 Educator	Erica Yanner	Terrebonne	K-2 Teacher
Grade 2 Educator	Angelia Grabert	Jefferson Parish	K-2 Principal
Grade 2 Educator	Meredith Starks	Bossier	K-3 Teacher
Grade 2 Educator	Bridget Flanders	Desoto	K-2 Teacher
Grade 2 Educator	Angel Maxey	Rapides	K-2 Teacher
Grade 2 Educator	Brandie McNabb	Zachary	K-2 Teacher
Grade 2 Educator	Cindy Ourso	West Baton Rouge	Elementary Supervisor
K-2 District Staff	Ann Hardy	Vermilion	Elementary Supervisor
K-2 District Staff	Alesia Blanchard	Terrebonne	K-6 ELA Specialist
K-2 District Staff	Kim Shackelford*	Lincoln	Coordinator of State and Federal Programs
K-2 District Staff	Anne Smith*	Vernon	Curriculum Director
K-2 District Staff	Tricia Miller	Calcasieu	K-5 Curriculum Specialist
University	Mary Breaud	Nicholls State University	Early Elementary Expert
LA Early Childhood Assn.	Michelle Joubert*	LAECA	President
Elementary Special Educ.	Aeneid Mason*	Zachary	Director of Special Education Services
BESE Appointment	Darlene Hills	New Orleans	Assistant Head of School
BESE Appointment	Deborah Catherine Wiltse	Rapides	Elementary Teacher
BESE Appointment	Jan Benton	Livingston	Former Assistant Superintendent

*Member also sits on the Standards Review Committee

3-12 ELA Content Subcommittee Members

Position	Name	District/Org	Role
3-5 Educator	Connie Hebert	Jefferson Davis	3-5 Teacher
3-5 Educator	Jasmine Hall	Lincoln	3-5 Teacher
3-5 Educator	Lindsey Parker	Desoto	3-5 Teacher
3-5 Educator	Christol Williams	Central	3-5 Teacher
3-5 Educator	Dennis Johnson	Concordia	3-5 Teacher
3-5 Educator	Zelda Smith	Orleans	Curriculum Specialist
6-8 Educator	Brittini Duhon	Iberia	6-8 Teacher
6-8 Educator	Lori Pennison	Assumption	Middle School Principal
6-8 Educator	Stacy Gunter	Rapides	6-8 Teacher
6-8 Educator	Nicolette Doughty	Caddo	6-8 Teacher
6-8 Educator	April Horn	Lafourche	Middle School Curriculum Specialist
6-8 Educator	Spencer Arenaud	St. Landry	Middle Instructional Coach
High School Educator	Lee Wall	Acadia	Middle School Principal
High School Educator	Jamie Guillot	Lafourche	6-12 Coordinator
High School Educator	Amy Brown	St. Charles	High School Teacher
High School Educator	LaQuisha Comeaux	Baker	High School Teacher
High School Educator	Misti Segura	East Baton Rouge	ELA Assessment Specialist
High School Educator	Latoya Winston	Tensas	High School Teacher
ELA District Staff	Jawan Alexander*	New Orleans	Assistant Head of School
ELA District Staff	Zanovia Curtis*	West Feliciana	District Instructional Coach
ELA District Staff	Jill Foster	Tangipahoa	District Master Teacher
ELA District Staff	Regina Sanford*	St. Tammany	Assistant Superintendent of Curriculum and Instruction
ELA District Staff	Laurie Carlton	Plaquemines	Secondary supervisor
University	Stan Barrerra	LA Assn of Colleges of Teacher Ed	Louisiana State University
Louisiana Reading Association (LRA)	Debbie Rickards*	LRA	Former Teacher and Curriculum Coordinator
Special Education	Demarious Poole	Livingston	Curriculum Coordinator, Special Education
BESE Appointment	Margo Guillot	St. Tammany	Retired Asst Supt of Curriculum and Instruction
BESE Appointment	Kelly Hobson	Caddo	4th Grade Teacher
BESE Appointment	Jasmine Porter	St. John	Master Teacher

*Member also sits on the Standards Review Committee

3-12 Math Content Subcommittee Members

Position	Name	District/Org	Role
3-5 Educator	Lisa Dumas	Monroe City	3-5 Teacher
3-5 Educator	Stephanie Smith	Franklin	3-5 Teacher
3-5 Educator	Janet Picou	Washington	K-5 Math Coach
3-5 Educator	Jodi Benoit	Lafayette	3-5 Teacher
3-5 Educator	Alnata Dione Bradford	Vernon	3-5 Teacher
3-5 Educator	Jada Singleton	Lafayette	Math Coach
6-8 Educator	Shelia Banks	Jefferson	District School Support Specialist
6-8 Educator	Debbie Evans	Caldwell	6-8 Teacher
6-8 Educator	Tessi Jean-Batiste	St. Martin	6-8 Teacher
6-8 Educator	Michael Brown	Pointe Coupee	6-8 Teacher
6-8 Educator	Jason Eric Smith	Jefferson	Curriculum Coordinator
6-8 Educator	Karin Lawless	Zachary	Supervisor Accountability, Math
High School Educator	Tammy Hall*	Bossier	High School Teacher
High School Educator	Ronda Lloyd	Franklin	High School Teacher
High School Educator	Trayvonnia Duhe	New Orleans	Director of Curriculum, Instruction, and Assessment
High School Educator	Renee Sears	Webster	High School Teacher
High School Educator	Jessica Hungerford	Beauregard	High School Teacher
High School Educator	LaDeisha George	Allen	High School Teacher
Math District Staff	Maribeth Holzer	Ouachita	Math Instructional Coach
Math District Staff	Stephen Zafirau	St. John	Math Curriculum Facilitator
Math District Staff	Serena White	Monroe City	K-12 Curriculum Supervisor
Math District Staff	Charlotte Boothe*	Rapides	Middle School Curriculum Specialist
Math District Staff	Dawn Henry	West Baton Rouge	Secondary Supervisor
University	Frank Neubrandner*	Louisiana State University	Department of Mathematics
LA Assn of Teachers of Math (LATM) & LA Council of Supervisors of Math (LCSM)	Ellen Brupbacher Daugherty	LATM	LSU Laboratory School
Special Education	Allison Cupit	St. John	Principal
BESE Appointment	Deborah McCollum	St. Tammany	Former Principal
BESE Appointment	Brenda Quigley DeFelice	Calcasieu	High School Teacher
BESE Appointment	Shawna Dufrene	Calcasieu	3-5 Teacher

*Member also sits on the Standards Review Committee

Review Process: Timeline Overview

Step	Date	Location
Public Comment Portal	June– Fall, 2015	Online
Standards Committee and Content Subcommittees <i>Organizational meeting</i>	Wednesday, August 19 9 am – 3 pm	Baton Rouge
Content Subcommittees <i>Produce first draft following meeting</i>	K-2: Monday, October 12 ELA: Wednesday, October 14 Math: Thursday, October 15 All Meetings: 9 am – 3 pm	Shreveport Alexandria Crowley
Standards Committee <i>First draft posted, reviewed, and feedback directed to sub-committees</i>	Thursday, November 12 9 am – 1 pm	Covington
Content Subcommittees <i>Update if needed</i>	Thursday, December 3 9 am – 3 pm	Meet only as needed <i>Locations repeated from above</i>
Standards Committee <i>Final draft and vote</i>	Tuesday, February 2 9 am – 12 pm	New Orleans

Review Process: Public Comment

Step	Details
Public Comment <i>July-Fall, 2015</i>	<ul style="list-style-type: none">• Standards posted on the website for public comment• Parents, committee members, educators, and other stakeholders share their feedback on each individual standard, K-12, math and ELA• The Southern Regional Education Board (SREB) summarizes public comments and shares a report with the committees to inform their review



Overview of the Louisiana Student Standards



The Louisiana Student Standards

The Louisiana Student Standards are statements that:

- ▶ Define **what** a student should know or be able to accomplish at the end of a specific time period or grade level or completion of a course.
- ▶ Represent the knowledge and skills needed for students to successfully transition to postsecondary education and the workplace.
- ▶ Serve as the basis for state assessments that
 - ▶ Set student achievement standards consistent with students nationally.
 - ▶ Provide questions comparable to national achievement tests, including but not limited to the National Assessment of Educational Progress.
- ▶ Allow local districts, schools, and teachers to develop and implement curriculum, content and methodology for required subjects.



How Standards Connect

- ▶ The standards build on skills learned in previous years and avoid repetition from year to year.
- ▶ Standards connect **across grades** and **within each grade**.

These progressions are important because:

- ▶ Students build new understanding on foundations built in previous years.
- ▶ Students have time to develop solid conceptual understanding of content and build on it.
- ▶ Each standard is not a new event, but an extension of previous learning.

How Standards Connect

- ▶ Committees should establish a plan for determining the effect of proposed revisions within and across grades.

- ▶ Considerations
 - How will the revision affect the establishment or building of content foundations **across grades**?
 - How will the revision affect connections among standards in the **same grade**?
 - Are there other standards which will need to be revised to maintain viable learning progressions?



Overview of the Louisiana Student Standards for English Language Arts (ELA) and Literacy

ELA Standards Terminology



English Language Arts/Literacy Standards:
Grade 3

Grade

Strand

Reading Standards for Literature

The following standards offer a focus for instruction each year and help ensure that students gain adequate exposure to a range of texts and tasks. Rigor is also infused through the requirement that students read increasingly complex texts through the grades. *Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades.*

Key Ideas and Details

1. Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.
2. Recount stories, including fables, folktales, and myths from diverse cultures; determine the central message, lesson, or moral and explain how it is conveyed through key details in the text.
3. Describe characters in a story (e.g., their traits, motivations, or feelings) and explain how their actions contribute to the sequence of events.

Craft and Structure

4. Determine the meaning of words and phrases as they are used in a text, distinguishing literal from non-literal language.
5. Refer to parts of stories, dramas, and poems when writing or speaking about a text, using terms such as chapter, scene, and stanza; describe how each successive part builds on earlier sections.

Standard



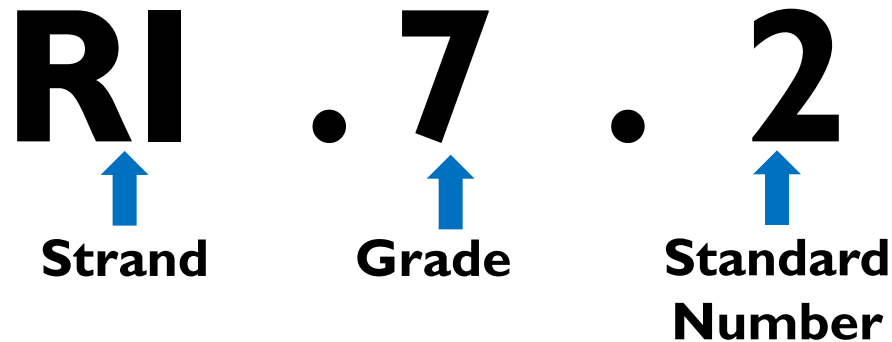
ELA Standards Terminology

English Language Arts Strands

- ▶ Reading
 - ▶ Reading Literature (RL)
 - ▶ Reading Informational Texts (RI)
 - ▶ Reading Foundational Skills (RF) *stops at grade 5*
- ▶ Writing (W)
- ▶ Speaking and Listening (SL)
- ▶ Language (L)



ELA Standards Terminology



The Louisiana Student Standards in English Language Arts note each strand name and its abbreviation.

The strand in this example is Reading Informational Texts from 7th grade.

Standard RI.7.2: *Determine two or more central ideas in a text and analyze their development over the course of the text; provide an objective summary of the text.*



ELA Standards Design: Across Grades

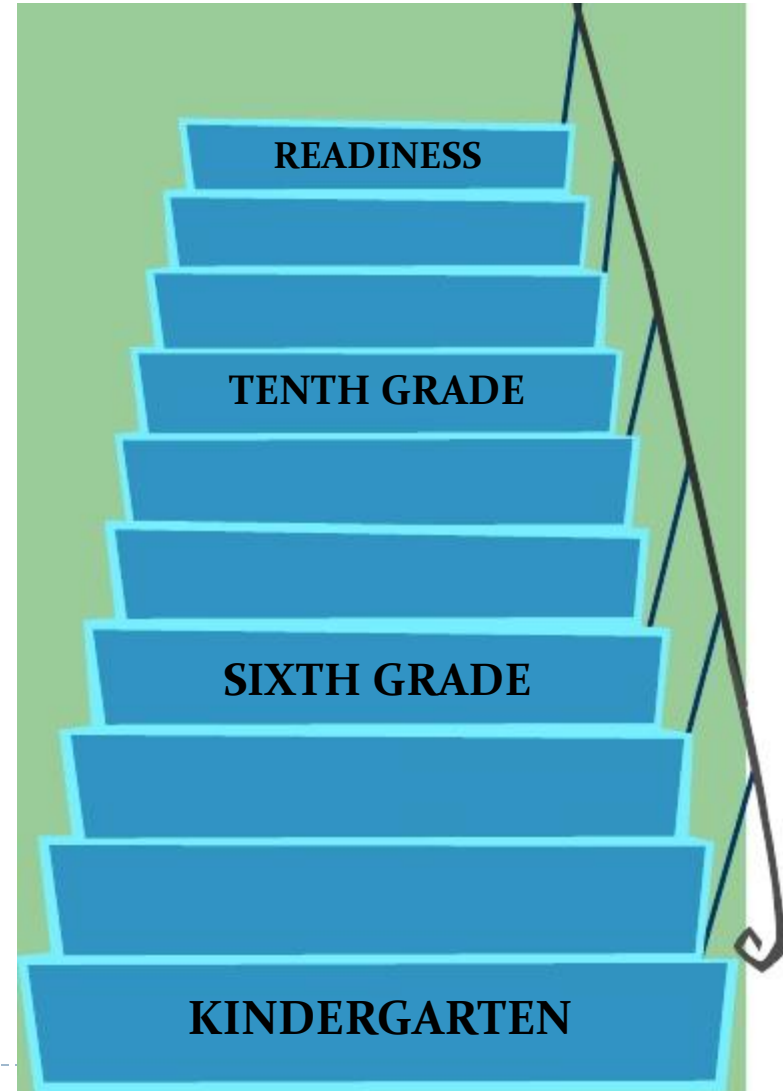
10th Grade: Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric, identifying any fallacious reasoning or exaggerated or distorted evidence.

7th Grade: Delineate a speaker's argument and specific claims, evaluating the soundness of the reasoning and the relevance and sufficiency of the evidence.

6th Grade: Delineate a speaker's argument and specific claims, distinguishing claims that are supported by reasons and evidence from claims that are not.

5th Grade: Summarize the points a speaker makes and explain how each claim is supported by reasons and evidence.

Kindergarten: Ask and answer questions in order to seek help, get information, or clarify something that is not understood.



ELA Standards Design: Within a Grade

- ▶ Students identify basic similarities in and differences between two texts on the same topic. (RI.1.9)
- ▶ Students participate in a shared research and writing projects (e.g., explore a number of “how-to” books on a given topic and use them to write a sequence of instructions). (W.1.7)
- ▶ Students use words and phrases acquired through conversations, reading and being read to, and responding to texts, including using frequently occurring conjunctions to signal simple relationships (e.g., *because*). (L.1.6)



ELA Standards Review Documents

ELA Standards

<http://www.louisianabelieves.com/docs/default-source/academic-standards/standards---k-12-english-language-arts7314e85b8c9b66d6b292ff0000215f92.pdf?sfvrsn=2>

How to Read the ELA Standards

<http://www.louisianabelieves.com/docs/default-source/academic-standards/how-to-read-the-ela-standards.pdf?sfvrsn=4>



Overview of the Louisiana Student Standards for Mathematics



Louisiana Student Standards for Mathematics

- ▶ Standards for Mathematical Content
 - ▶ K-8 standards presented by grade level
 - ▶ High school standards presented by course (Algebra I, Geometry, Algebra II)
 - ▶ Standards presented by Conceptual Category in high school courses
 - ▶ Number and Quantity
 - ▶ Algebra
 - ▶ Functions
 - ▶ Modeling
 - ▶ Geometry
 - ▶ Statistics and Probability



Terminology

- ▶ **Conceptual Category** – The largest group of related standards formed by putting related domains under the same heading. *Applies to high school only.*
- ▶ **Domain** - A larger group of related standards formed by putting related clusters under the same heading.
 - ▶ **Cluster** – A group of related standards.
 - ▶ **Standard** - A description of what students should understand and be able to do.



Largest Groupings in Louisiana Standards

K-8 Domains

- Counting & Cardinality (CC)
- Operations & Algebraic Thinking (OA)
- Number & Operation in Base Ten (NBT)
- Number & Operations – Fractions (NF)
- Measurement & Data (MD)
- Geometry (G)
- Ratios & Proportional Relationships (RP)
- The Number System (NS)
- Expressions & Equations (EE)
- Statistics & Probability (SP)
- Functions (F)

High School Conceptual Categories

- Number and Quantity (N)
- Algebra (A)
- Functions (F)
- Modeling (no code)
- Specific modeling standards appear throughout the high school standards and are indicated by a star symbol (★)
- Geometry (G)
- Statistics and Probability (S)



K-8 Sample


Domain
Operations and Algebraic Thinking

**Grade and Domain
Abbreviation** → **4.OA**

A. Use the four operations with whole numbers to solve problems. Cluster

- Standard**
1. Interpret a multiplication equation as a comparison, e.g., interpret $35 = 5 \times 7$ as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations.
 2. Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.¹
 3. Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.

B. Gain familiarity with factors and multiples. Cluster

4. Find all factor pairs for a whole number in the range 1–100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1–100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1–100 is prime or composite.
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- 

K-8 Code Summary

PART ONE
Grade Level

PART TWO
Domain

PART THREE
Cluster

PART FOUR
Standard #

6

EE

C

9



High School Sample

Domain Name

Algebra ← Conceptual Category

Seeing Structure in Expressions

A-SSE ←

Conceptual Category and Domain Abbreviations

A. Interpret the structure of expressions. **Cluster**

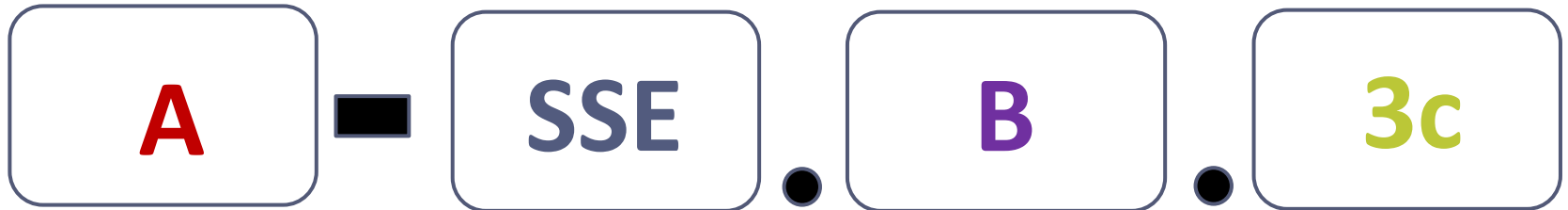
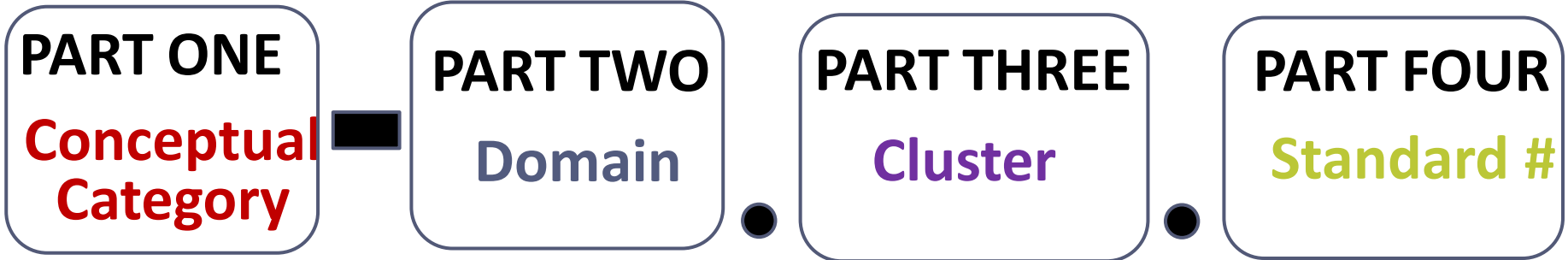
1. Interpret expressions that represent a quantity in terms of its context. ★
 - a. Interpret parts of an expression, such as terms, factors, and coefficients.
 - b. Interpret complicated expressions by viewing one or more of their parts as a single entity. *For example, interpret $P(1+r)^n$ as the product of P and a factor not depending on P .*
2. Use the structure of an expression to identify ways to rewrite it. *For example, see $x^4 - y^4$ as $(x^2)^2 - (y^2)^2$, thus recognizing it as a difference of squares that can be factored as $(x^2 - y^2)(x^2 + y^2)$.*

B. Write expressions in equivalent forms to solve problems. **Cluster**

3. Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression. ★
 - a. Factor a quadratic expression to reveal the zeros of the function it defines.
 - b. Complete the square in a quadratic expression to reveal the maximum or minimum value of the function it defines.
 - c. Use the properties of exponents to transform expressions for exponential functions. *For example the expression 1.15^t can be rewritten as $(1.15^{1/12})^{12t} \approx 1.012^{12t}$ to reveal the approximate equivalent monthly interest rate if the annual rate is 15%.*

Standards

High School Code Summary



How the Math Standards Connect Across Grades

F-IF.B.6 Calculate and interpret the **average rate of change** of a function (presented symbolically or as a table) over a specified interval. Estimate the rate of change from a graph.*

8.F.4 Construct a function to model a linear relationship between two quantities. Determine **the rate of change** and initial value of the function from a description of a relationship or from two (x, y) values, including reading these from a table or from a graph. Interpret the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values.

7.RP.2b Recognize and represent proportional relationships between quantities. Identify the **constant of proportionality (unit rate)** in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships.

6.RP.2 Understand the **concept of a unit rate** a/b associated with a ratio $a:b$ with $b \neq 0$, and use rate language in the context of a ratio relationship. For example, "This recipe has a ratio of 3 cups of flour to 4 cups of sugar, so there is $3/4$ cup of flour for each cup of sugar." "We paid \$75 for 15 hamburgers, which is a rate of \$5 per hamburger."

5.NF.5b Interpret multiplication as **scaling (resizing)**, by explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relating the principle of fraction equivalence $a/b = (n \times a)/(n \times b)$ to the effect of multiplying a/b by 1.

4.NF.1 Explain why a **fraction a/b is equivalent to a fraction $(n \times a)/(n \times b)$** by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.

3.NF.3 Explain **equivalence of fractions** in special cases, and compare fractions by reasoning about their size.

How the Math Standards Connect Within A Grade

Standard (Excerpt)	Example
<p>4.NF.A.1 Explain why a fraction a/b is equivalent to a fraction $(n \times a)/(n \times b)$ by using visual fraction models,...</p> <p>Use this principle to generate equivalent fractions.</p> <p>Grade 4 denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, and 100.</p>	$\frac{1}{2} \times \frac{5}{5} = \frac{5}{10}$
<p>4.NF.C.5 Express a fraction with denominator 10 as an equivalent fraction with denominator 100...</p>	$\frac{5}{10} \times \frac{10}{10} = \frac{50}{100}$
<p>4.NF.D.6 Use decimal notation for fractions with denominators 10 or 100.</p>	$\frac{5}{10} = 0.5$ $\frac{50}{100} = 0.50$

Math Standards Review Documents

Louisiana Mathematics Standards

<http://www.louisianabelieves.com/docs/default-source/academic-standards/standards---k-12-mathematics.pdf?sfvrsn=8>

How to Read the Mathematics Standards

<http://www.louisianabelieves.com/docs/default-source/academic-standards/how-to-read-the-math-standards.pdf?sfvrsn=4>



Summary of Public Feedback from Standards Review Portal



Southern Regional Education Board (SREB)

- SREB is a nonprofit, nonpartisan organization that works with 16 member states to improve public education at every level, from pre-K through Ph.D. Member states are AL, AR, DE, FL, GA, KY, LA, MD, MS, NC, OK, SC, TN, TX, VA and WV.
- The organization works with policymakers such as state legislators and education agency officials as they implement policies to improve student achievement, raise high school graduation rates and boost college completion.
- SREB conducts research, collects and analyzes data, publishes reports, and recommends action on current and emerging issues. SREB also works directly with public schools and educators to improve classroom teaching and learning, career/technical education, online education and school leadership.

Standards Review Public Feedback

- All public feedback is now available for review on [BESE's website](#) and the [Department of Education's website](#).
- SREB is reviewing all comments and will provide reports on the feedback overall and by grade level. The reports will be available at the links above on Tuesday, August 18. Copies of the reports will be made available for participants at the meetings.

Public Comment



Committee Next Steps

Sub-committees review standards and propose updates:

- All Standards Review Committee members are encouraged to join a content subcommittee breakout this afternoon. Those meetings will begin in 30 minutes.
- Throughout September and October content sub-committees will review grade specific standards and propose changes.
- All changes will be considered at the October subcommittee meetings. From these meetings a proposed set of changes will be sent to the Standards Review Committee.
- The Standards Review Committee will review a first draft of the standards on November 12.
- The public comment portal will remain open through the fall. New comments will be posted publically and submitted to the committees for review at the October and November meetings.

Committee Next Steps

Step	Details
Standards Committee and Content Subcommittee Organizational Meeting <i>August 19, 2015</i>	After the meeting: <ul style="list-style-type: none"> Minutes from meeting posted by Monday, August 24 Content subcommittees draft updates by Friday, September 25 Reimbursement forms should be submitted to LouisianaStandards@la.gov by Friday, September 4

Step	Details
Content Subcommittees <i>9 am – 3 pm</i> K-2: Monday, October 12 Shreveport <i>ELA: Wednesday, October 14</i> <i>Alexandria</i> <i>Math: Thursday, October 15</i> <i>Crowley</i>	Before the meeting: <ul style="list-style-type: none"> <u>Content subcommittees draft their findings by Friday, September 25</u> Participants receive compiled findings by Friday, October 9 Agenda, PowerPoint presentations, and participant pre-work posted by Friday, October 9 During the meeting: <ul style="list-style-type: none"> Full review of each individual standard, findings, and proposed changes (presentation and discussion from each grade level) Check for alignment from K-2 to 3-12 content subcommittees Subcommittees propose a set of standards for submission to Standards Committee

Review Process: Details

Step	Details
<p>Standards Committee</p> <p><i>Thursday, November 12</i></p> <p>9 AM – 1 PM</p> <p><i>Covington</i></p>	<p>Before the meeting:</p> <ul style="list-style-type: none"><li>• Participants review recommended changes to standards, consider grade band alignment, and receive any additional comments from subcommittee members and the public<li>• Participants receive documents above by Wednesday, November 4<li>• Agenda, PowerPoint presentation, and participant pre-work posted by Wednesday, November 4 <p>During the meeting:</p> <ul style="list-style-type: none"><li>• Full review of each subcommittee’s proposed changes (presentation by Chairs from each subcommittee)<li>• Full review of alignment considerations between grade bands, reviewed individually and reconciled<li>• Chair directs content subcommittees to review revisions where required <p>After the meeting:</p> <ul style="list-style-type: none"><li>• Minutes from meeting posted by Monday, November 16<li>• Content subcommittees notified by Friday, November 13 if they must convene

