CCSS 101 & Assessment: Implications for Practice

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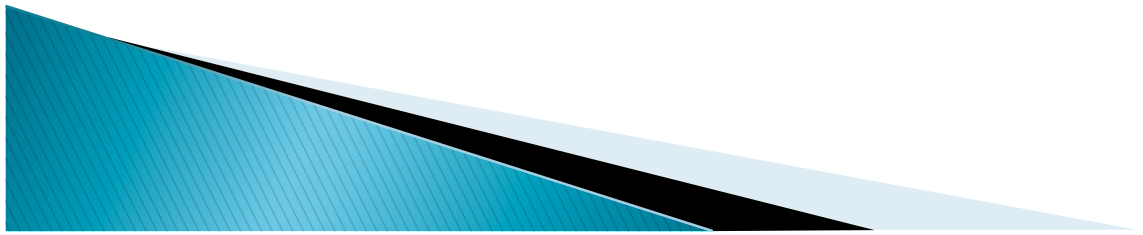
Keynote Address: 2014 Annual Meeting of
the Georgia Association of School Psychologists

The Standards Movement

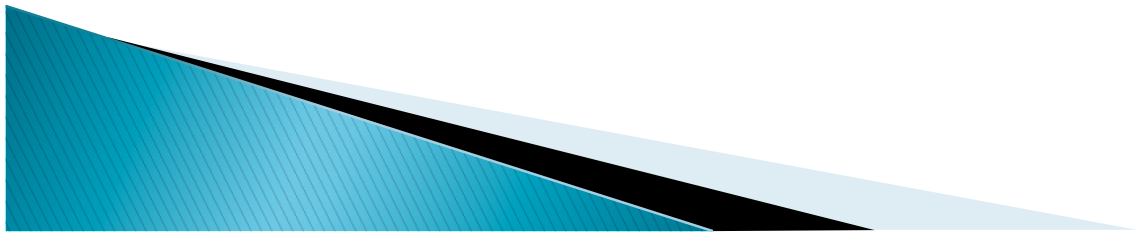
- International Comparisons of Student Achievement
  - PISA (Programme for International Student Assessment)
  - TIMSS (Third International Science and Math Study)
- A Nation at Risk
- State-Based Standards
- NCLB
- Common Core State Standards
- Race to the Top



Why CCSS?

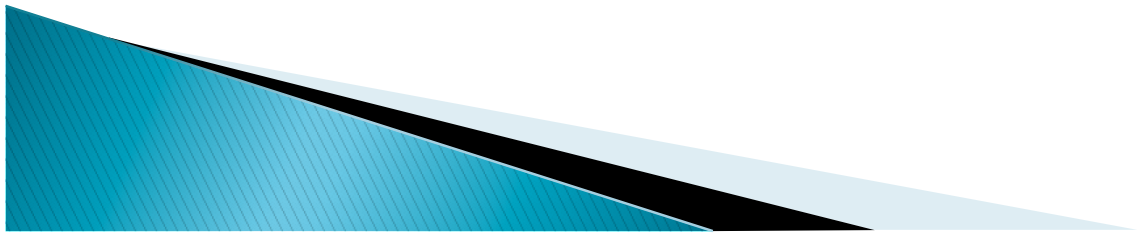
CCSS Development

- State education chiefs and governors in 48 states came together to develop the Common Core, a set of clear college- and career-ready standards for K-12th grade in English language arts/literacy and mathematics.



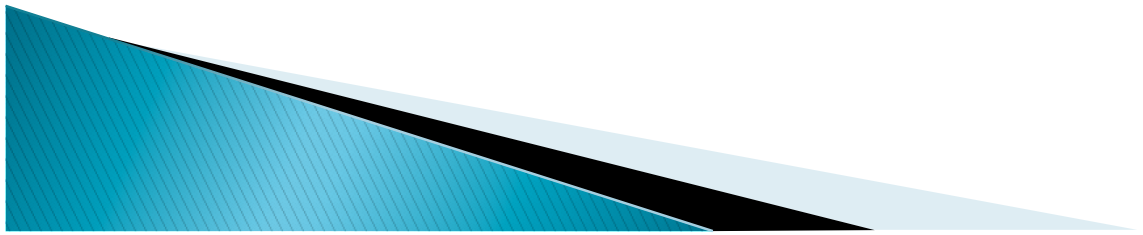
CCSS Development

- These subjects were chosen because they are areas upon which students build skill sets that are used in other subjects. Students must learn to read, write, speak, listen, and use language effectively in a variety of content areas, so the standards specify the literacy skills and understandings required for college and career readiness in multiple disciplines.



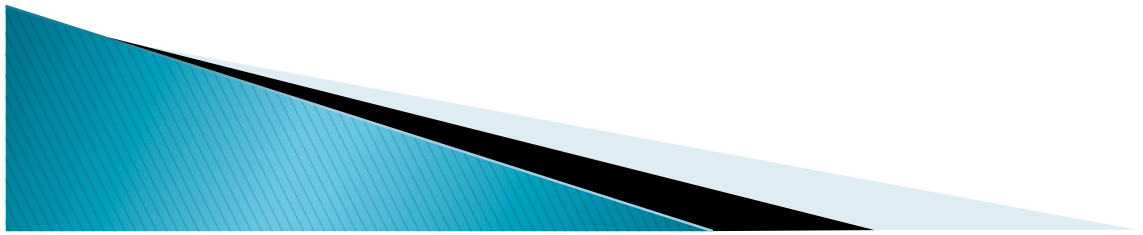
CCSS Development

- The literacy standards in history/social studies, science, and technical subjects for grades 6–12 are meant to supplement content standards in those areas, not replace them.
- States determine how to incorporate these standards into their standards for those subjects or adopt them as content area literacy standards.



CCSS Development

- Today, 43 states have voluntarily adopted and are working to implement the standards, which are designed to ensure that students graduating from high school are prepared to take credit bearing introductory courses in two- or four-year college programs or enter the workforce.

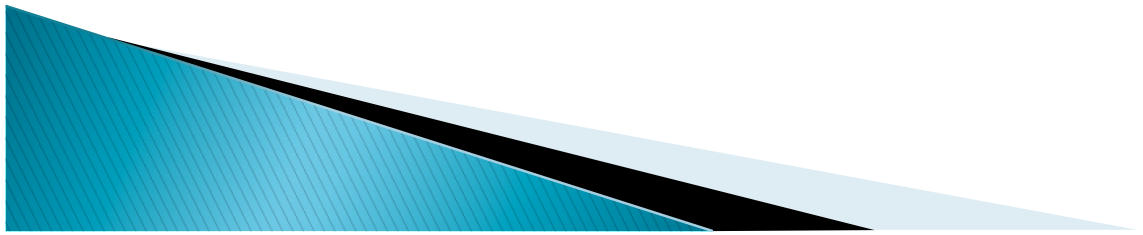


CCSS Development

- The nation's governors and education commissioners, through their representative organizations, the National Governors Association Center for Best Practices (NGA) and the Council of Chief State School Officers (CCSSO), led the development of the Common Core State Standards and continue to lead the initiative. Teachers, parents, school administrators, and experts from across the country, together with state leaders, provided input into their development.

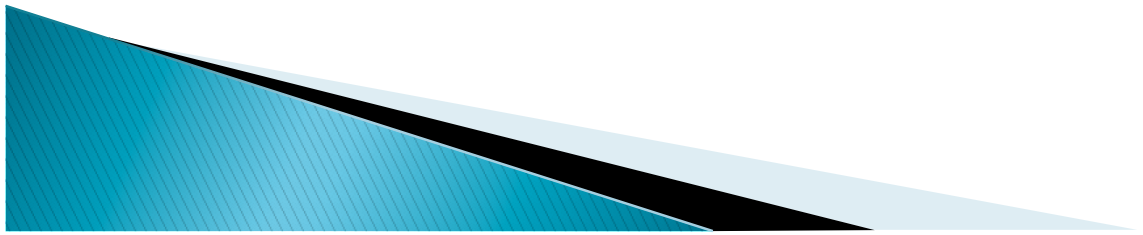
CCSS Development

- Prior to the development of the Common Core State Standards, research revealed striking similarities among the standards in top-performing nations, along with stark differences between those world-class expectations and the standards adopted by most U.S. states. As a result, standards from top-performing countries were consulted during the development of the Common Core State Standards.



CCSS in Georgia

- The standards create a foundation to work collaboratively across states and districts, pooling resources and expertise, to create curricular tools, professional development, common assessments, and other instructional materials.

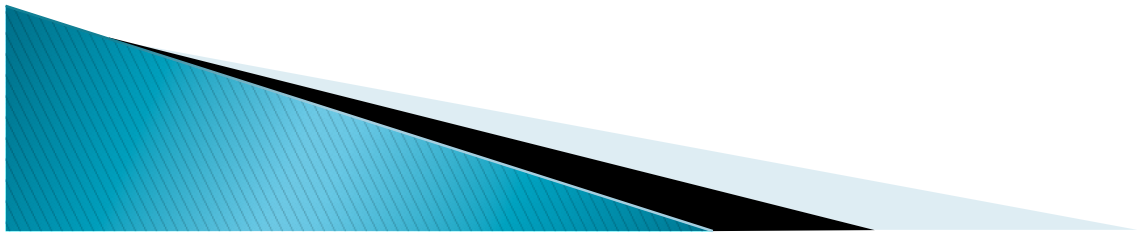


CCSS Development

- The actual implementation of the Common Core, including how the standards are taught, the curriculum developed, and the materials used to support teachers as they help students reach the standards, is led entirely at the state and local levels.

CCSS in Georgia

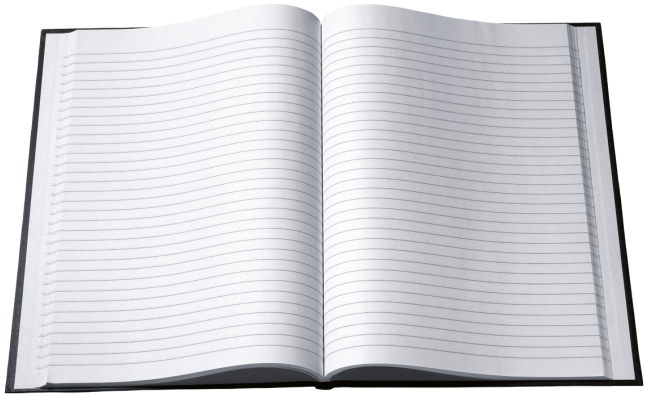
- The CCGPS for English language arts, mathematics, and literacy in science, history/social studies, and technical subjects will ensure that all Georgia students have an equal access and opportunity to master the skills and knowledge needed for success beyond high school.

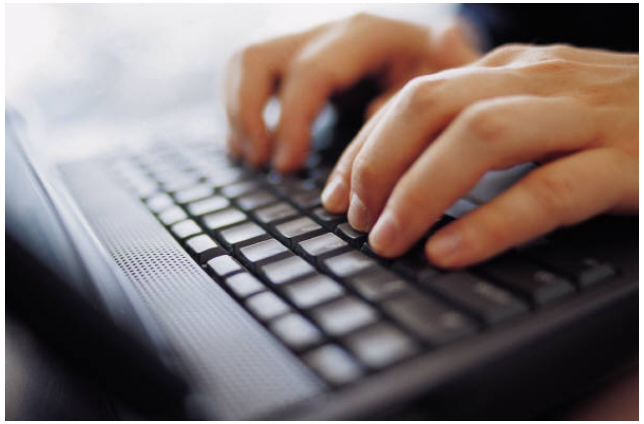


CCSS in Georgia

- Effective implementation of the CCGPS requires support on multiple fronts, including strengthening teacher content knowledge, pedagogical skills, and contextualized tasks for students that effectively engage 21st Century learners.

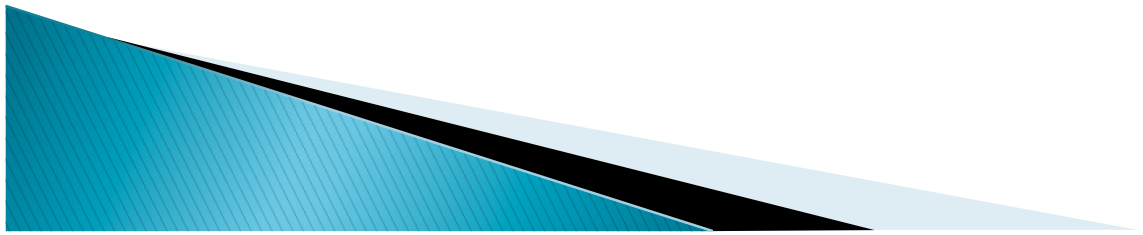
ELA Standards





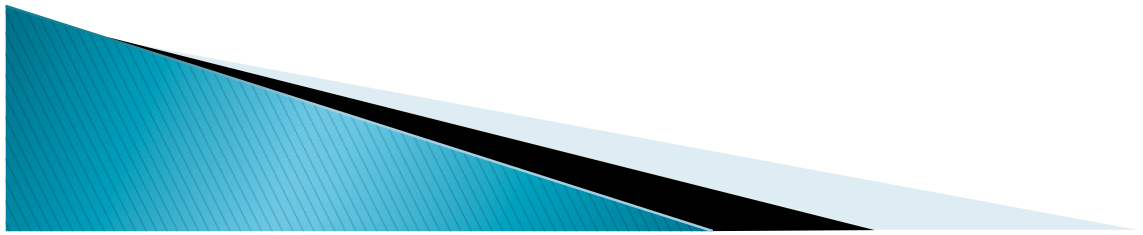
English Language Arts & Literacy

- **Regular practice with complex texts and their academic language.**
- **Reading, writing, and speaking grounded in evidence from texts, both literary and informational.**
- **Building knowledge through content-rich nonfiction.**



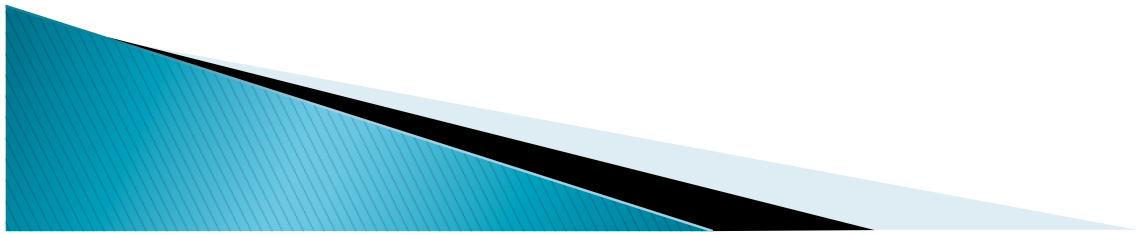
A Variety of Standards!

- Foundational Skills Standards (K-5) emphasize print concepts, phonological awareness, phonics and word recognition, and fluency.
- College & Career Readiness Standards (K-12)



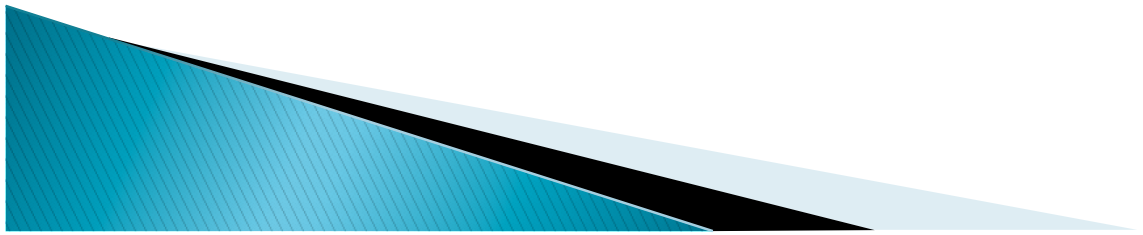
A Variety of Standards!

- Grade-Specific Standards for:
  - Reading Different Types of Text
    - Literary
    - History / Social Studies (Grades 6-12)
    - Science & Technical Subjects (Grades 6-12)
  - Speaking and Listening
  - Language
  - Writing
    - Literary
    - History / Social Studies (Grades 6-12)
    - Science & Technical Subjects (Grades 6-12)



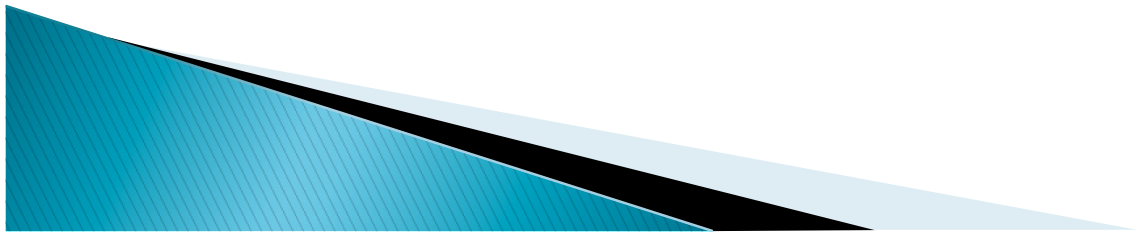
Complex Texts

- Rather than focusing solely on the skills of reading and writing, the ELA/literacy standards highlight the growing complexity of the texts students must read to be ready for the demands of college, career, and life.
- The standards call for a staircase of increasing complexity so that all students are ready for the demands of college- and career-level reading no later than the end of high school.



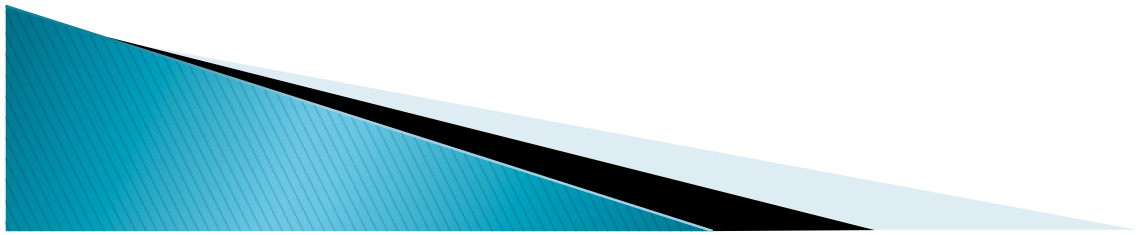
Complex Texts

- The Reading standards place equal emphasis on the sophistication of what students read and the skill with which they read. Standard 10 defines a grade-by- grade “staircase” of increasing text complexity that rises from beginning reading to the college and career readiness level.



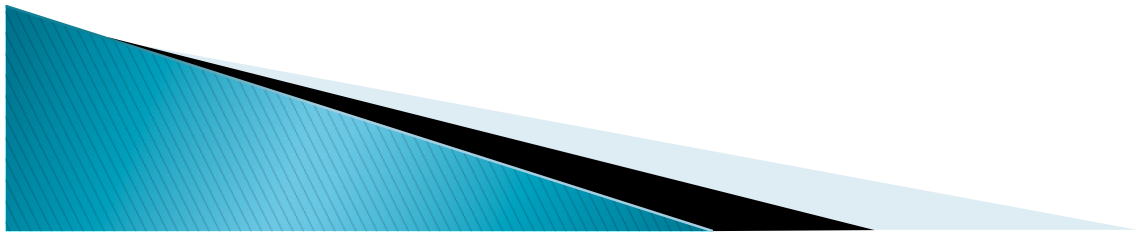
Complex Texts

- Whatever they are reading, students must also show a steadily growing ability to discern more from and make fuller use of text, including making an increasing number of connections among ideas and between texts, considering a wider range of textual evidence, and becoming more sensitive to inconsistencies, ambiguities, and poor reasoning in texts.



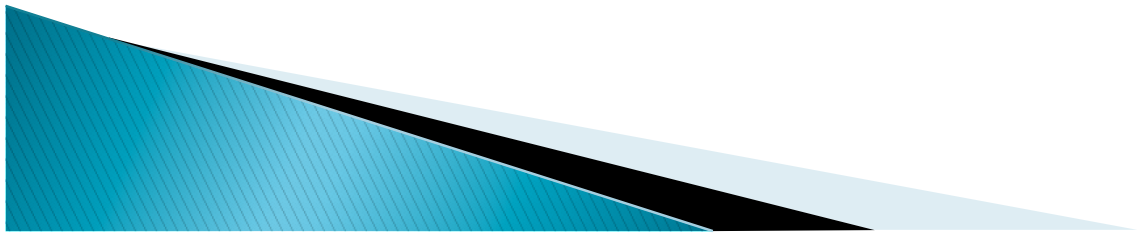
Complex Texts

- The standards also outline a progressive development of reading comprehension so that students advancing through the grades are able to gain more from what they read.
- They intentionally do not include a required reading list. Instead, they include numerous sample texts to help teachers prepare for the school year and allow parents and students to know what to expect during the year.



Complex Texts

- The standards include certain critical types of content for all students, including classic myths and stories from around the world, foundational U.S. documents, seminal works of American literature, and the writings of Shakespeare

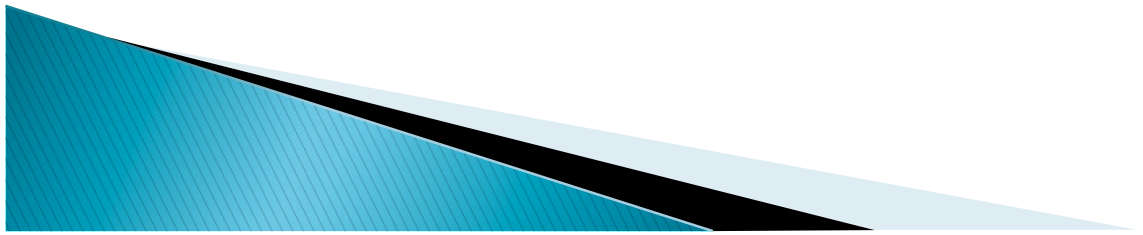


Complex Texts

- Closely related to text complexity and inextricably connected to reading comprehension is a focus on academic vocabulary: words that appear in a variety of content areas (such as *ignite* and *commit*).
- The standards call for students to grow their vocabularies through a mix of conversation, direct instruction, and reading. They ask students to determine word meanings, appreciate the nuances of words, and steadily expand their range of words and phrases.

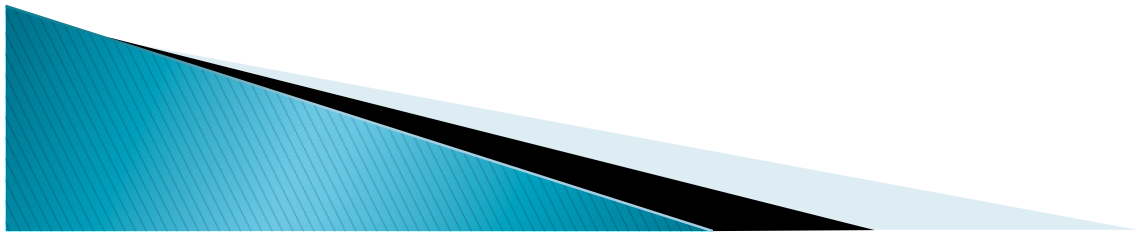
Vocabulary & Conventions

- Vocabulary and conventions are treated in their own strand not because skills in these areas should be handled in isolation, but because their use extends across reading, writing, speaking, and listening.



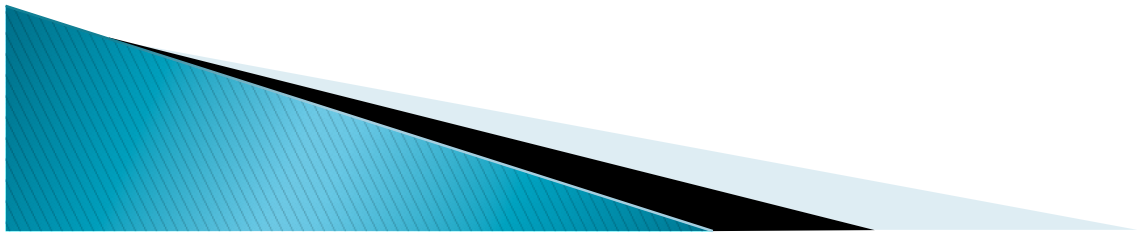
Evidence-Based Focus

- **Reading, writing, and speaking grounded in evidence from texts, both literary and informational**
- The reading standards focus on students' ability to read carefully and grasp information, arguments, ideas, and details based on evidence in the text. Students should be able to answer a range of *text-dependent* questions, whose answers require inferences based on careful attention to the text.



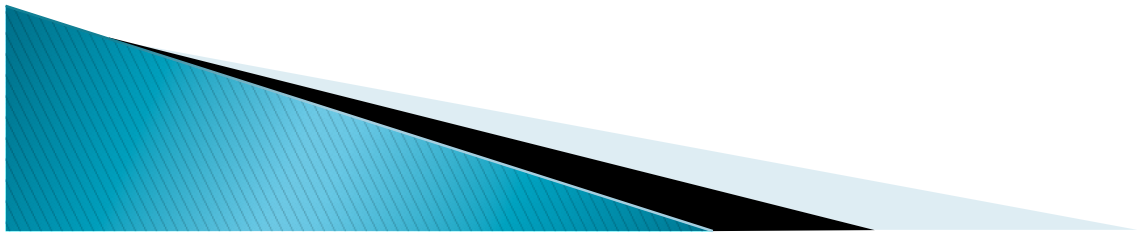
Evidence-Based Focus

- Frequently, forms of writing in K–12 have drawn heavily from student experience and opinion, which alone will not prepare students for the demands of college, career, and life.



Evidence-Based Focus

- Though the standards still expect narrative writing throughout the grades, they also expect a command of sequence and detail that are essential for effective argumentative and informative writing. The standards' focus on evidence-based writing along with the ability to inform and persuade is a significant shift from current practice.

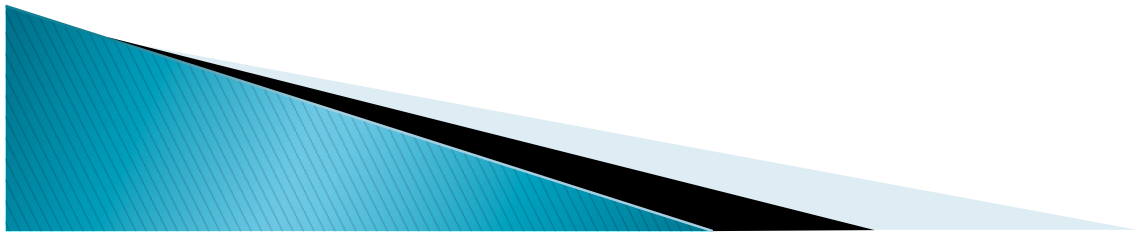


Inclusion of Non-Fiction

- **<u>Building knowledge</u> through content-rich nonfiction.**
- In K-5, fulfilling the standards requires a 50-50 balance between informational and literary reading.
  - Informational reading includes content-rich nonfiction in history/social studies, sciences, technical studies, and the arts. The K-5 standards strongly recommend that texts—both within and across grades—be selected to support students in systematically developing knowledge about the world.

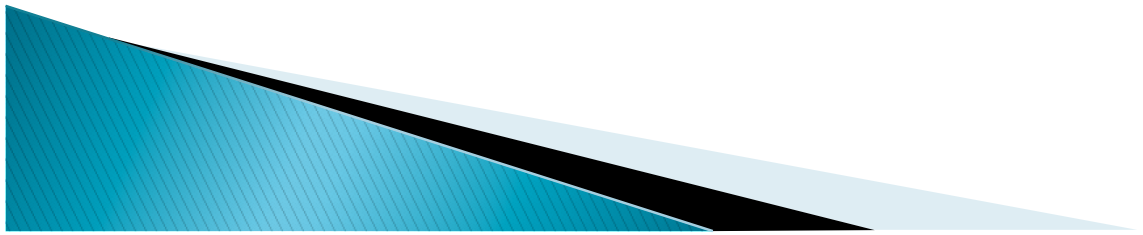
Inclusion of Non-Fiction

- In grades 6-12, there is much greater attention on the specific category of literary nonfiction, which is a shift from traditional standards.
  - The standards for literacy in history/social studies, science, and technical subjects ensure that students can independently build knowledge in these disciplines through reading and writing.



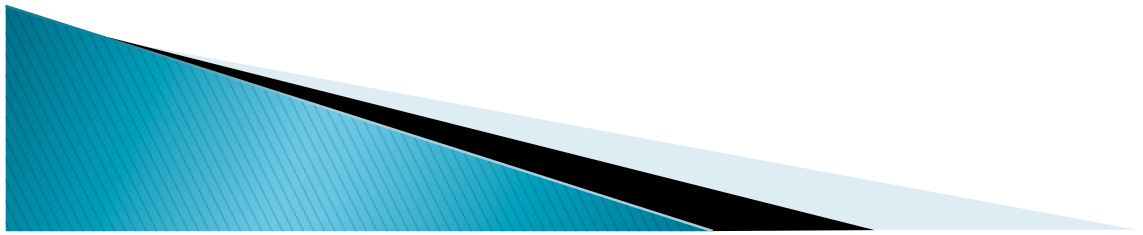
Speaking and Listening

- Including but not limited to skills necessary for formal presentations, the Speaking and Listening standards require students to develop a range of broadly useful oral communication and interpersonal skills.



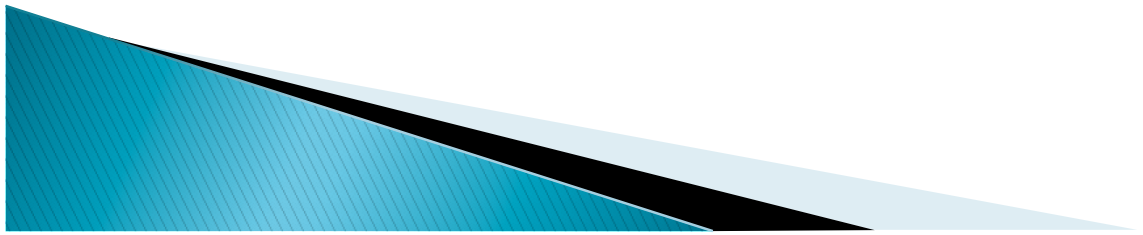
Speaking and Listening

- Students must learn to work together, express and listen carefully to ideas, integrate information from oral, visual, quantitative, and media sources, evaluate what they hear, use media and visual displays strategically to help achieve communicative purposes, and adapt speech to context and task.



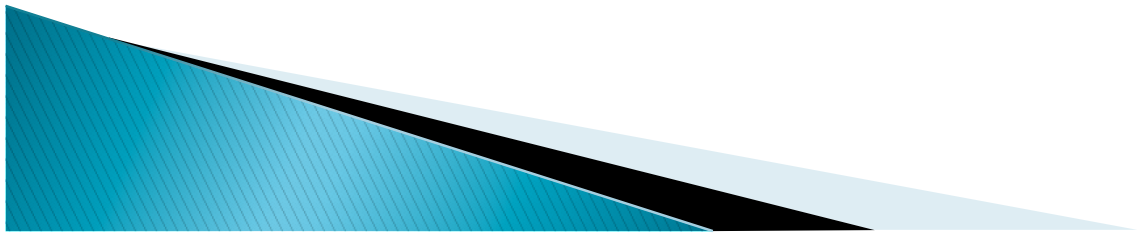
Language Conventions

- The Language standards include the essential "rules" of standard written and spoken English, but they also approach language as a matter of craft and informed choice among alternatives.



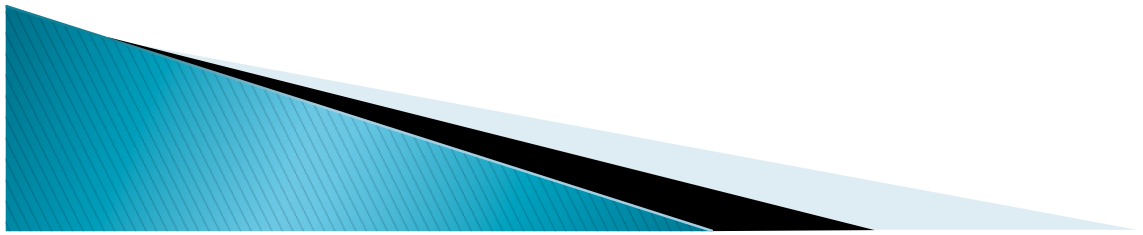
Literacy Across Content Areas

- Reading, writing, speaking, and listening should span the school day from K-12 as integral parts of every subject.



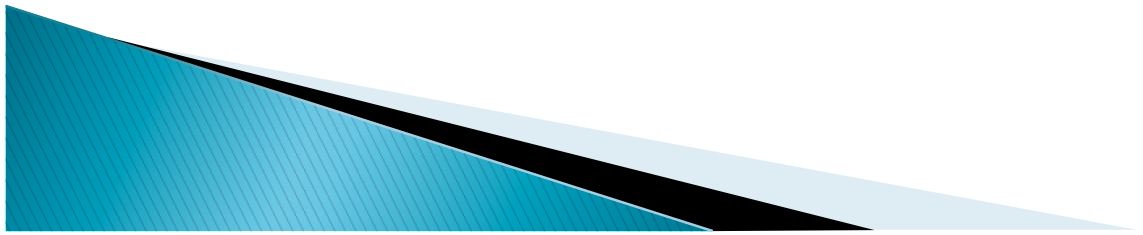
Literacy Across Content Areas

- A single K–5 section lists standards for reading, writing, speaking, listening, and language across the curriculum, reflecting the fact that most or all of the instruction students in these grades receive comes from one teacher.



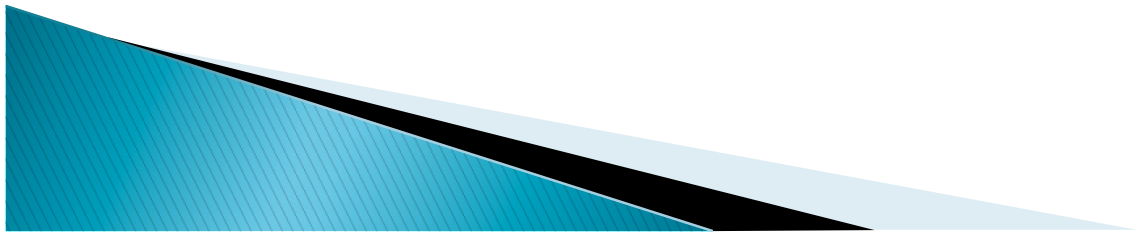
Literacy Across Content Areas

- Grades 6–12 are covered in two content area–specific sections, the first for the English language arts teacher and the second for teachers of history/social studies, science, and technical subjects.
- Each section uses the same CCR anchor standards but also includes grade-specific standards tuned to the literacy requirements of the particular discipline(s).



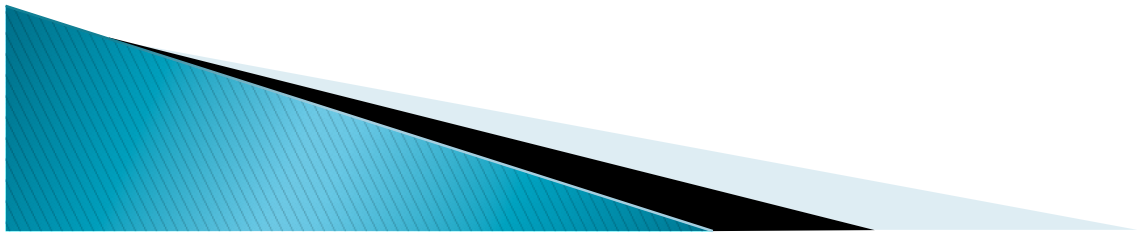
Anchor Standards

- Both College and Career Readiness Anchor Standards and Grade-Level Specific Standards exist
- The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.



Anchor Standards

- Key Ideas and Details
  - Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.
  - Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.
  - Analyze how and why individuals, events, and ideas develop and interact over the course of a text.



Key Ideas and Details

Kindergarten

- With prompting and support, ask and answer questions about key details in a text.

Grade 1

- Ask and answer questions about key details in a text.

Grade 2

- Ask and answer such questions as *who, what, where, when, why,* and *how* to demonstrate understanding of key details in a text.

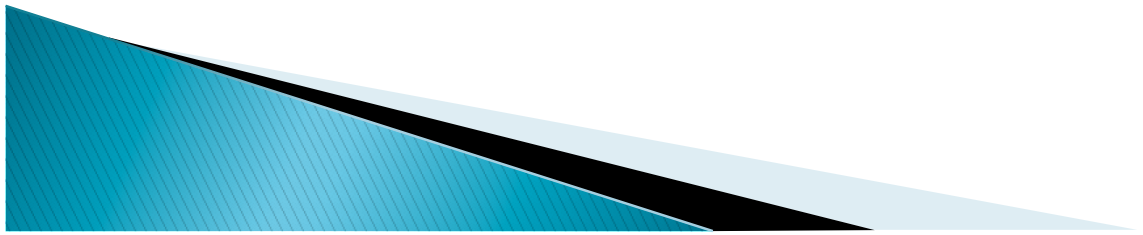
Key Ideas and Details

Grade 3

- Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.

Grade 4

- Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.



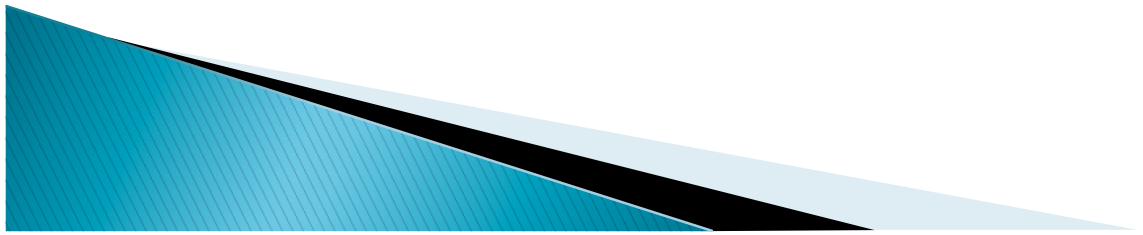
Key Ideas and Details

Grade 5

- Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text.

Grade 6

- Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.



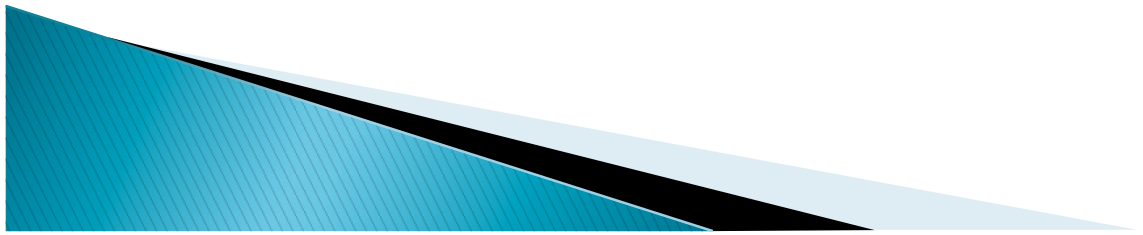
Key Ideas and Details

Grade 7

- Cite several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

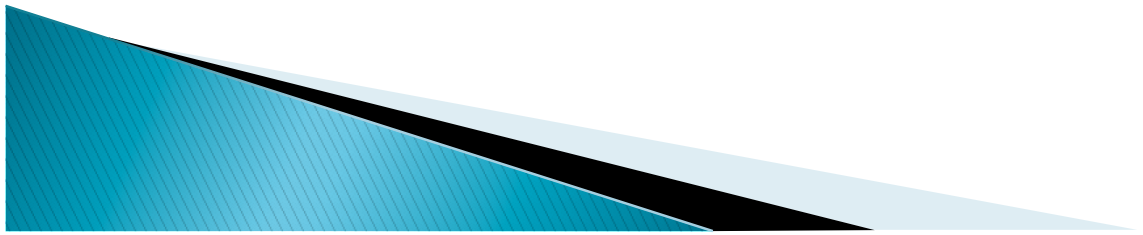
Grade 8

- Cite the textual evidence that most strongly supports an analysis of what the text says explicitly as well as inferences drawn from the text.



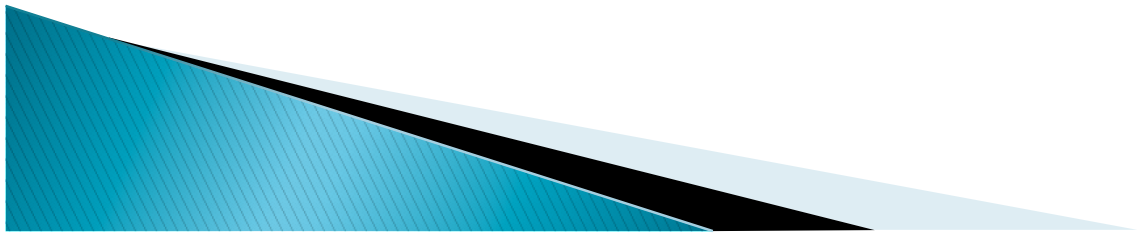
Anchor Standards

- Craft and Structure
  - Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.
  - Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text (e.g., a section, chapter, scene, or stanza) relate to each other and the whole.
  - Assess how point of view or purpose shapes the content and style of a text.



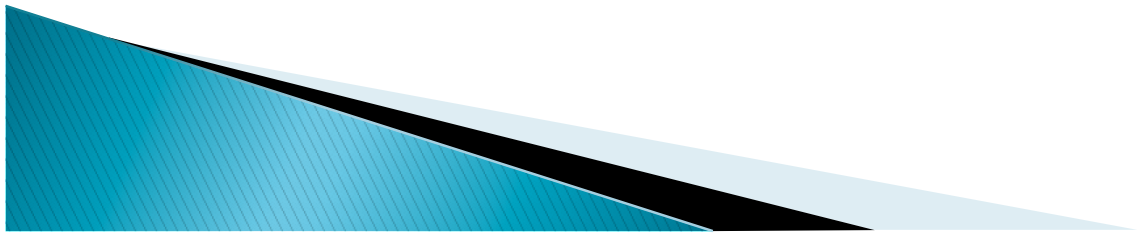
Anchor Standards

- Integration of Knowledge and Ideas
  - Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.
  - Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.
  - Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take.



Anchor Standards

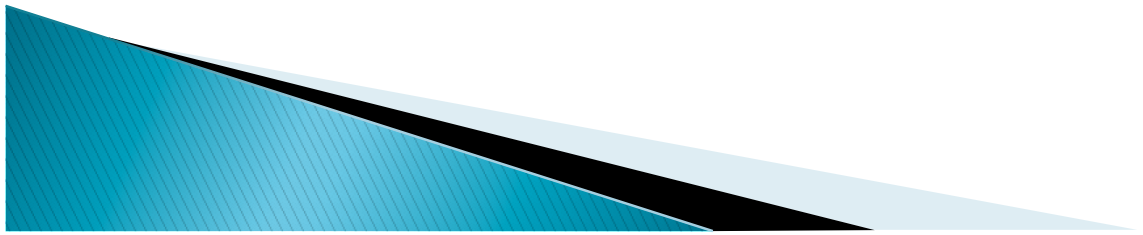
- Range of Reading and Level of Text Complexity
  - Read and comprehend complex literary and informational texts independently and proficiently.



CCSS Mathematics

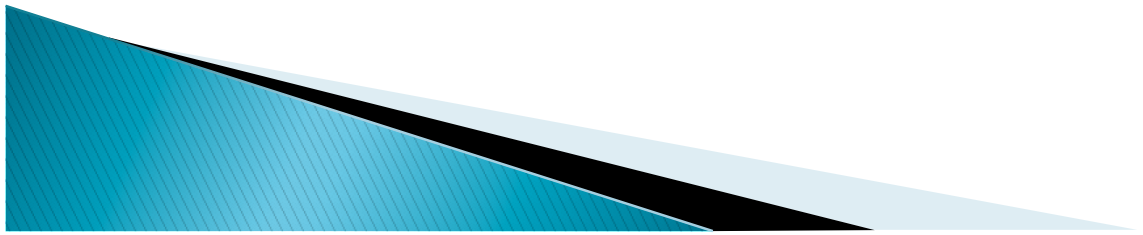
CCSS Mathematics

- Greater focus on fewer topics
- Coherence: Linking topics and thinking across grades
- Rigor: Pursue conceptual understanding, procedural skills and fluency, and application with equal intensity



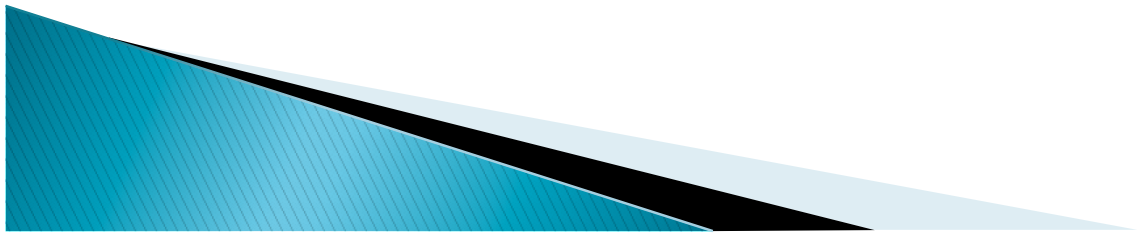
Standards for Math Practice

- **Make sense of problems and persevere in solving them.**
  - Mathematically proficient students start by explaining to themselves the meaning of a problem and looking for entry points to its solution. They analyze givens, constraints, relationships, and goals. They monitor and evaluate their progress and change course if necessary.



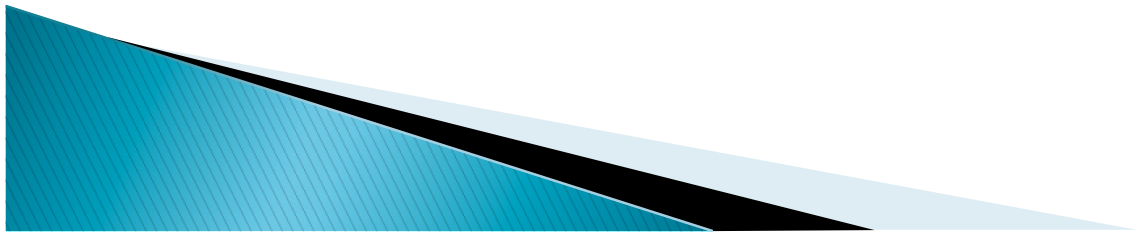
Standards for Math Practice

- **Make sense of problems and persevere in solving them.**
  - Older students might, depending on the context of the problem, transform algebraic expressions or change the viewing window on their graphing calculator to get the information they need. Mathematically proficient students can explain correspondences between equations, verbal descriptions, tables, and graphs or draw diagrams of important features and relationships, graph data, and search for regularity or trends.



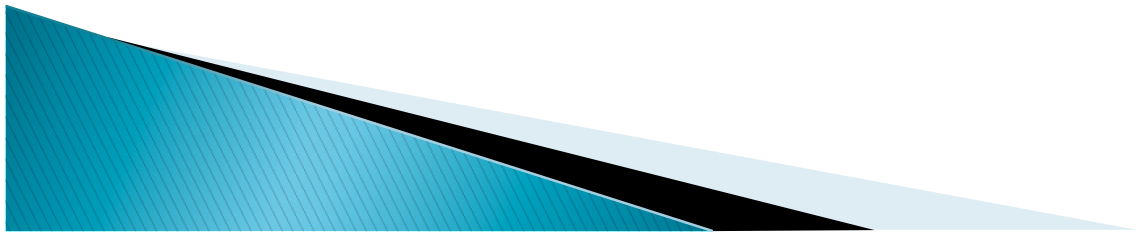
Standards for Math Practice

- **Reason abstractly and quantitatively.**
  - Mathematically proficient students make sense of quantities and their relationships in problem situations. They bring two complementary abilities to bear on problems involving quantitative relationships: the ability to *decontextualize—to* abstract a given situation and represent it symbolically and manipulate the representing symbols as if they have a life of their own, without necessarily attending to their referents—and the ability to *contextualize*, to pause as needed during the manipulation process in order to probe into the referents for the symbols involved.



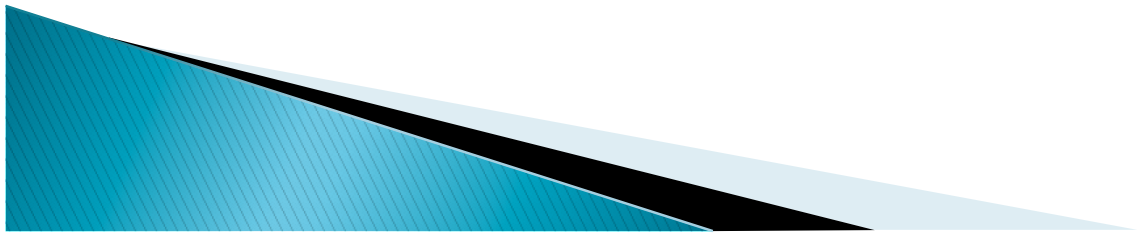
Standards for Math Practice

- **Reason abstractly and quantitatively.**
  - Quantitative reasoning entails habits of creating a coherent representation of the problem at hand; considering the units involved; attending to the meaning of quantities, not just how to compute them; and knowing and flexibly using different properties of operations and objects.



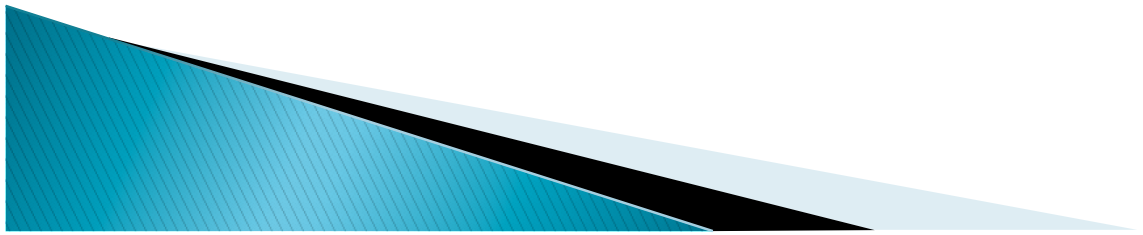
Standards for Math Practice

- **Construct viable arguments and critique the reasoning of others.**
  - Mathematically proficient students understand and use stated assumptions, definitions, and previously established results in constructing arguments. They make conjectures and build a logical progression of statements to explore the truth of their conjectures. They are able to analyze situations by breaking them into cases, and can recognize and use counterexamples.



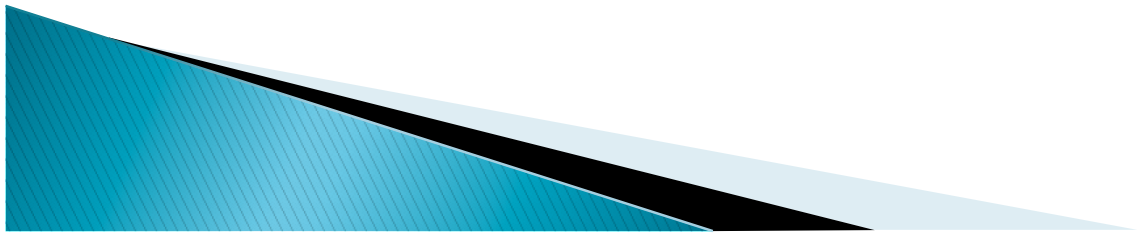
Standards for Math Practice

- **Construct viable arguments and critique the reasoning of others.**
  - Mathematically proficient students justify their conclusions, communicate them to others, and respond to the arguments of others. They reason inductively about data, making plausible arguments that take into account the context from which the data arose.



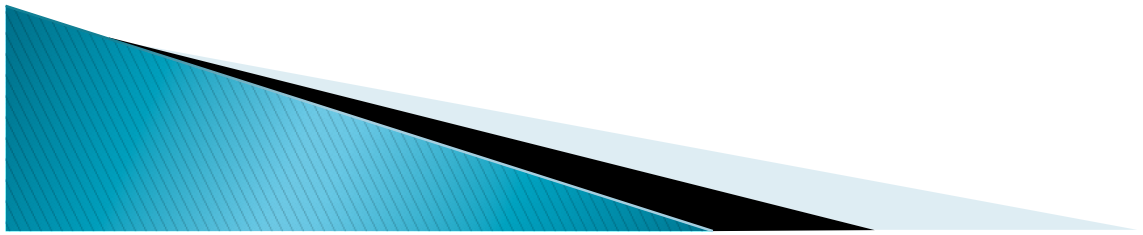
Standards for Math Practice

- **Construct viable arguments and critique the reasoning of others.**
  - Mathematically proficient students are also able to compare the effectiveness of two plausible arguments, distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in an argument—explain what it is. Elementary students can construct arguments using concrete referents such as objects, drawings, diagrams, and actions. Later, students learn to determine domains to which an argument applies.



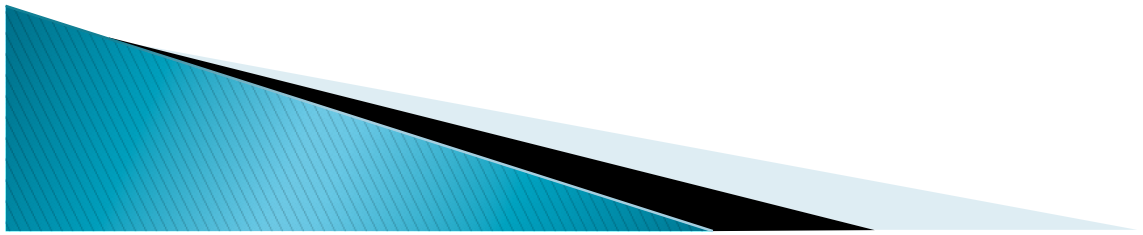
Standards for Math Practice

- **Construct viable arguments and critique the reasoning of others.**
  - Students at all grades can listen or read the arguments of others, decide whether they make sense, and ask useful questions to clarify or improve the arguments.



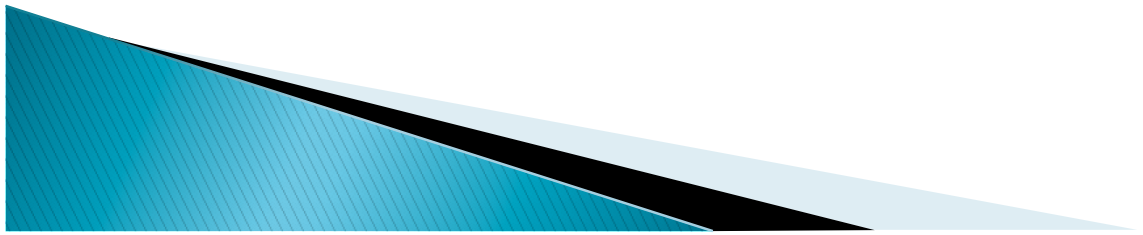
Standards for Math Practice

- **Model with mathematics.**
  - Mathematically proficient students can apply the mathematics they know to solve problems arising in everyday life, society, and the workplace. In early grades, this might be as simple as writing an addition equation to describe a situation. In middle grades, a student might apply proportional reasoning to plan a school event or analyze a problem in the community. By high school, a student might use geometry to solve a design problem or use a function to describe how one quantity of interest depends on another.



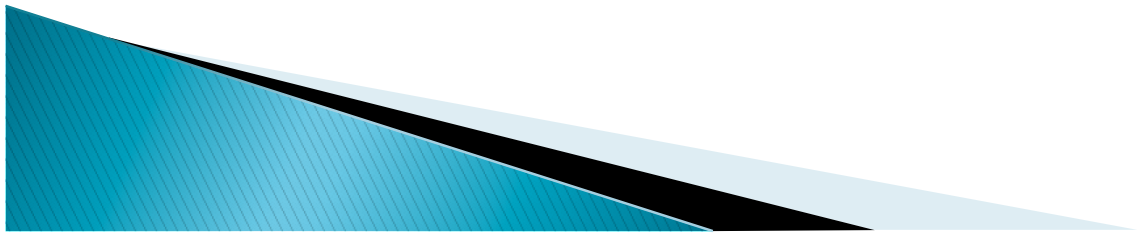
Standards for Math Practice

- **Model with mathematics.**
  - Mathematically proficient students are able to identify important quantities in a practical situation and map their relationships using such tools as diagrams, two-way tables, graphs, flowcharts and formulas. They can analyze those relationships mathematically to draw conclusions. They routinely interpret their mathematical results in the context of the situation and reflect on whether the results make sense, possibly improving the model if it has not served its purpose.



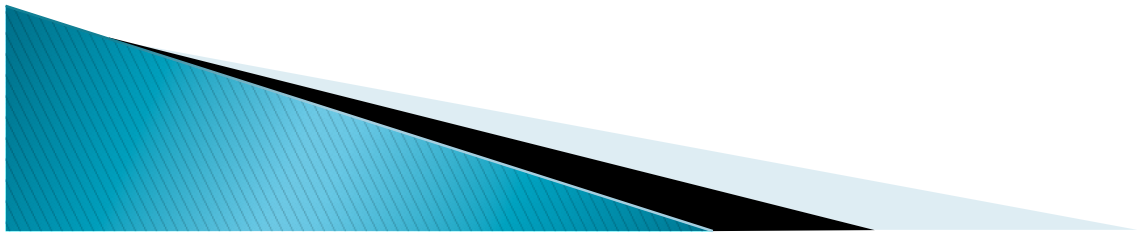
Standards for Math Practice

- **Use appropriate tools strategically.**
  - Mathematically proficient students consider the available tools when solving a mathematical problem (pencil and paper, concrete models, a ruler, a protractor, a calculator, a spreadsheet, a computer algebra system, a statistical package, or dynamic geometry software). Proficient students are sufficiently familiar with tools appropriate for their grade or course to make sound decisions about when each of these tools might be helpful, recognizing both the insight to be gained and their limitations.



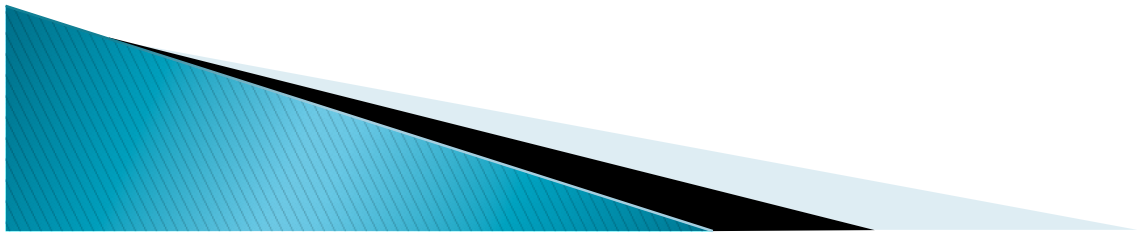
Standards for Math Practice

- **Look for and make use of structure.**
  - Mathematically proficient students look closely to discern a pattern or structure. Young students, for example, might notice that three and seven more is the same amount as seven and three more, or they may sort a collection of shapes according to how many sides the shapes have. Later, students will see 7 x 8 equals the well remembered 7 x 5 + 7 x 3, in preparation for learning about the distributive property.



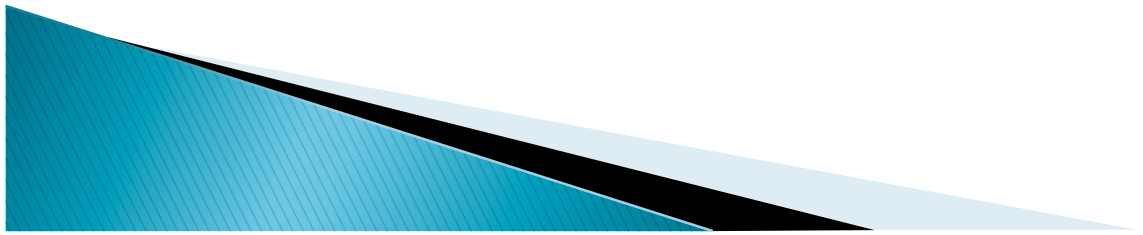
Standards for Math Practice

- **Look for and express regularity in repeated reasoning.**
  - Mathematically proficient students notice if calculations are repeated, and look both for general methods and for shortcuts.



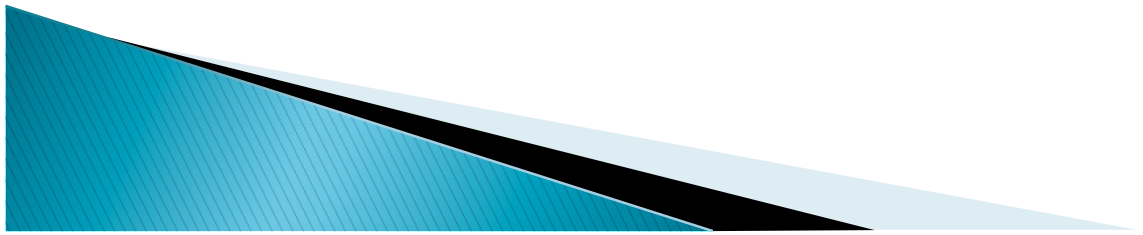
Standards for Math Content

- Represent a balanced combination of procedure and understanding.
- Expectations that begin with the word "understand" are often especially good opportunities to connect the practices to the content.
  - Students who lack understanding of a topic may rely on procedures too heavily.



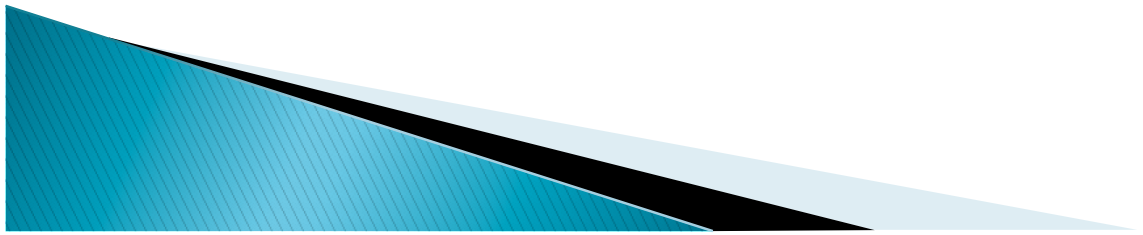
Focus on Fewer Topics

- The Common Core calls for greater focus in mathematics. Rather than racing to cover many topics in a mile-wide, inch-deep curriculum, the standards ask math teachers to significantly narrow and deepen the way time and energy are spent in the classroom.
- This means focusing deeply on the major work of each grade as follows:



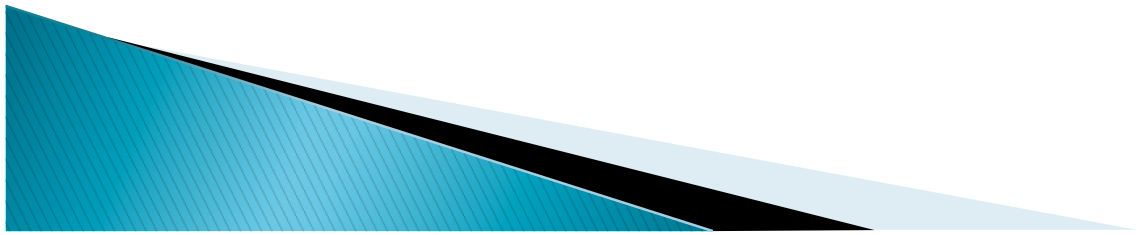
Focus on Fewer Topics

- In grades K–2: Concepts, skills, and problem solving related to addition and subtraction
- In grades 3–5: Concepts, skills, and problem solving related to multiplication and division of whole numbers and fractions



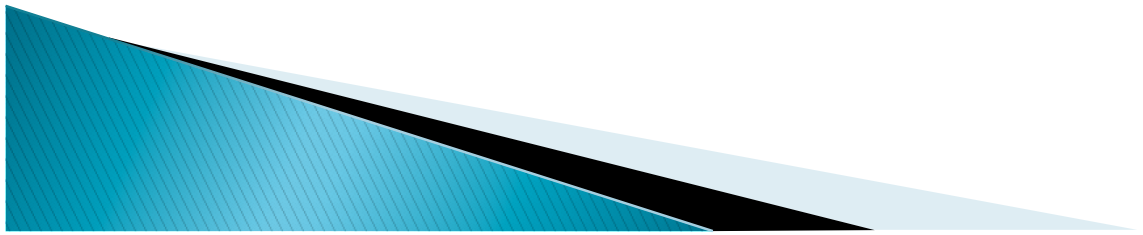
Linking Across Grades

- Mathematics is not a list of disconnected topics, tricks, or mnemonics; it is a coherent body of knowledge made up of interconnected concepts.
- Therefore, the standards are designed around coherent progressions from grade to grade. Learning is carefully connected across grades so that students can build new understanding onto foundations built in previous years.



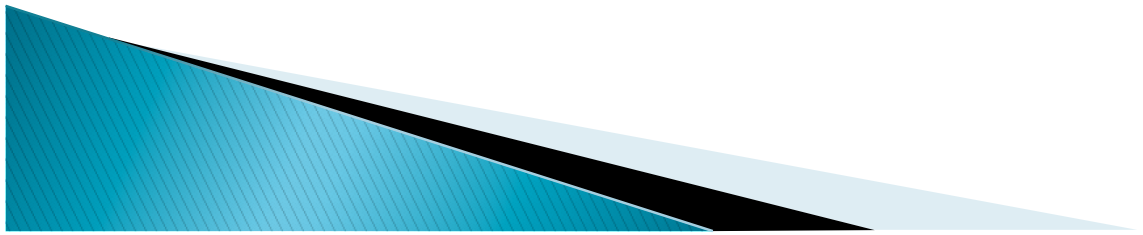
Linking Across Grades

- For example, in 4th grade, students must “apply and extend previous understandings of multiplication to multiply a fraction by a whole number” (Standard 4.NF.4).
- This extends to 5th grade, when students are expected to build on that skill to “apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction” (Standard 5.NF.4).



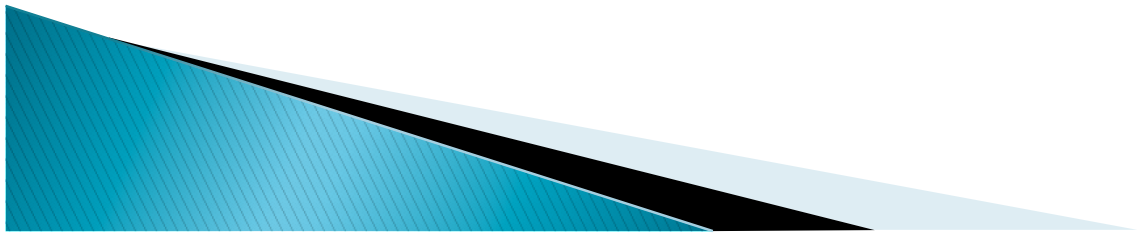
Linking Across Grades

- Coherence is also built into the standards in how they reinforce a major topic in a grade by utilizing supporting, complementary topics.
- For example, instead of presenting the topic of data displays as an end in itself, the topic is used to support grade-level word problems in which students apply mathematical skills to solve problems.



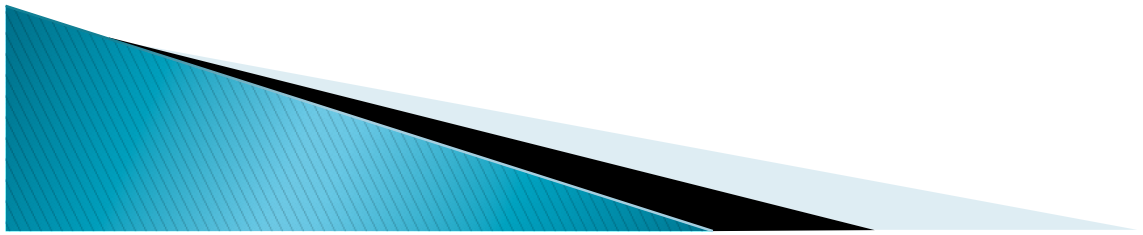
Deep Understanding

- Rigor refers to deep, authentic command of mathematical concepts, not making math harder or introducing topics at earlier grades.
- To help students meet the standards, educators will need to pursue, with equal intensity, three aspects of rigor in the major work of each grade: conceptual understanding, procedural skills and fluency, and application.



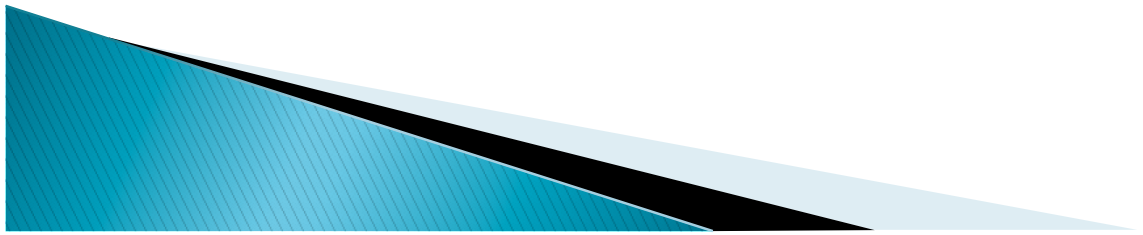
Deep Understanding

- *Conceptual understanding:* The standards call for conceptual understanding of key concepts, such as place value and ratios. Students must be able to access concepts from a number of perspectives in order to see math as more than a set of mnemonics or discrete procedures.



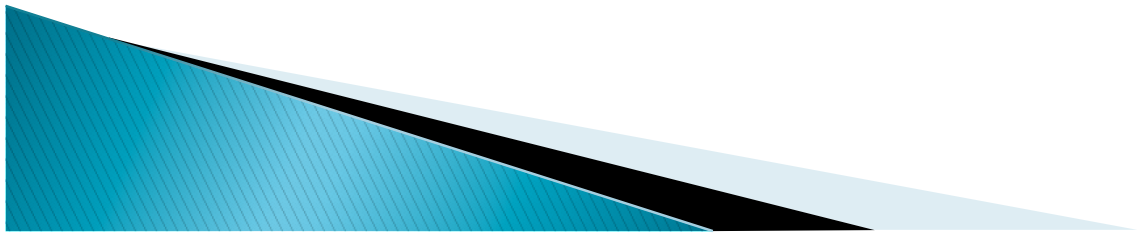
Deep Understanding

- *Procedural skills and fluency:* The standards call for speed and accuracy in calculation. Students must practice core functions, such as single-digit multiplication, in order to have access to more complex concepts and procedures.
- Fluency must be addressed in the classroom or through supporting materials, as some students might require more practice than others.



Deep Understanding

- *Application:* The standards call for students to use math in situations that require mathematical knowledge.
- Correctly applying mathematical knowledge depends on students having a solid conceptual understanding and procedural fluency.

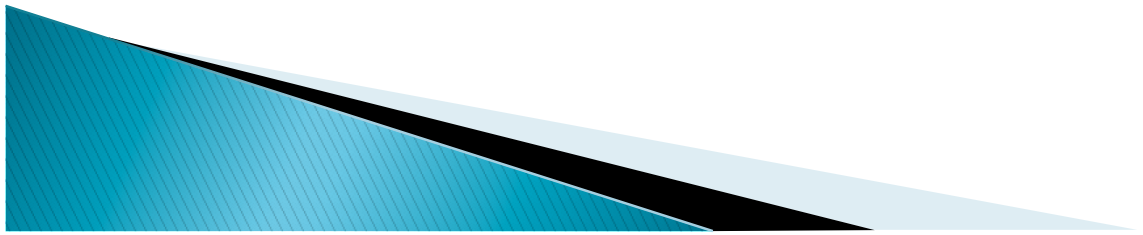


Kindergarten (24)

- Instructional time should focus on two critical areas: (1) representing, relating, and operating on whole numbers, initially with sets of objects; (2) describing shapes and space. More learning time in Kindergarten should be devoted to number than to other topics.
  - Counting and Cardinality
  - Operations and Algebraic Thinking
  - Number and Operations in Base Ten
  - Measurement and Data
  - Geometry

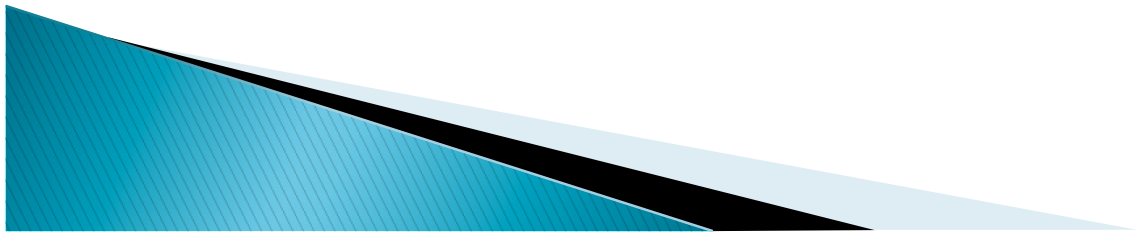
Grade 1 (23)

- Instructional time should focus on: (1) developing understanding of addition, subtraction, and strategies for addition and subtraction within 20; (2) developing understanding of whole number relationships and place value, including grouping in tens and ones; (3) developing understanding of linear measurement and measuring lengths as iterating length units; and (4) reasoning about attributes of, and composing and decomposing geometric shapes.



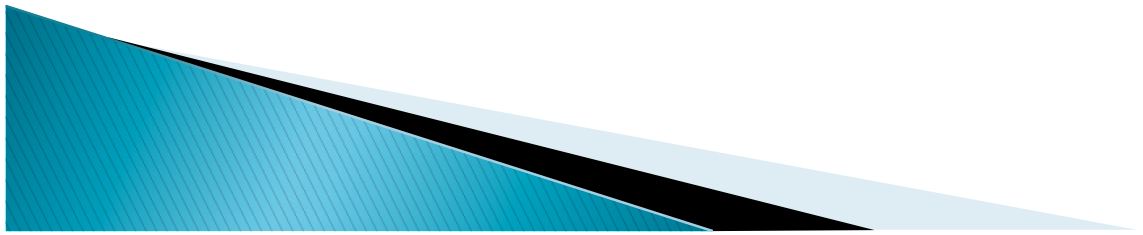
Grade 1

- Operations and Algebraic Thinking
- Number and Operations in Base Ten
- Measurement and Data
- Geometry



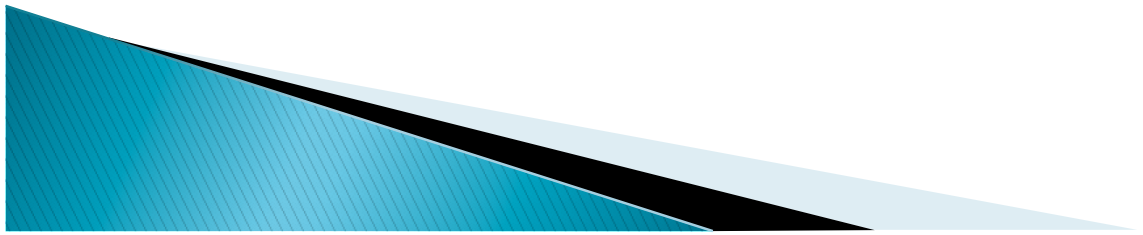
Grade 2 (28)

- Instructional time should focus on four critical areas: (1) extending understanding of base-ten notation; (2) building fluency with addition and subtraction; (3) using standard units of measure; and (4) describing and analyzing shapes.



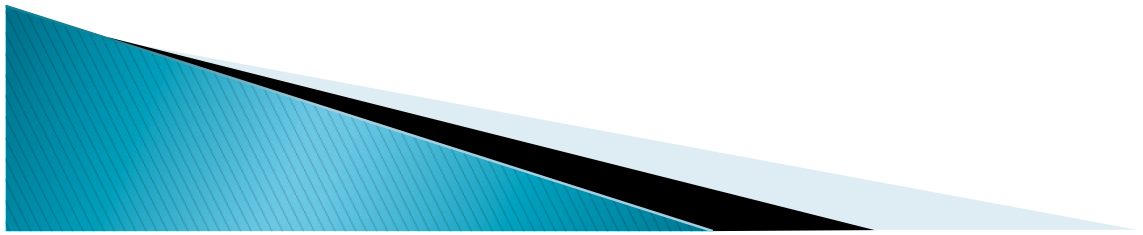
Grade 2

- Operations and Algebraic Thinking
- Number and Operations in Base Ten
- Measurement and Data
- Geometry



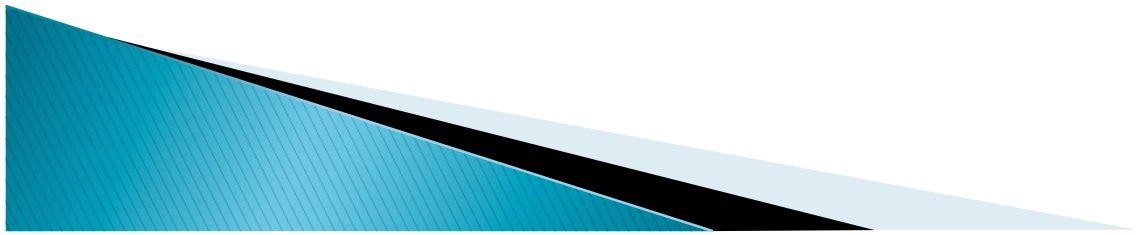
Grade 3 (33)

- Instructional time should focus on four critical areas: (1) developing understanding of multiplication and division and strategies for multiplication and division within 100; (2) developing understanding of fractions, especially unit fractions (fractions with numerator 1); (3) developing understanding of the structure of rectangular arrays and of area; and (4) describing and analyzing two-dimensional shapes.



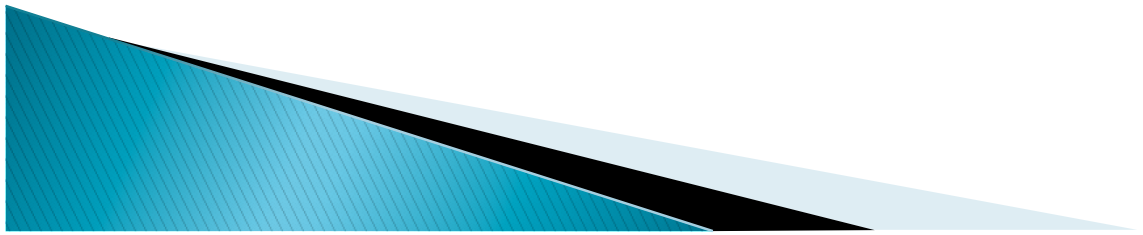
Grade 3

- Operations and Algebraic Thinking
- Number and Operations in Base Ten
- Number and Operations - Fractions
- Measurement and Data
- Geometry



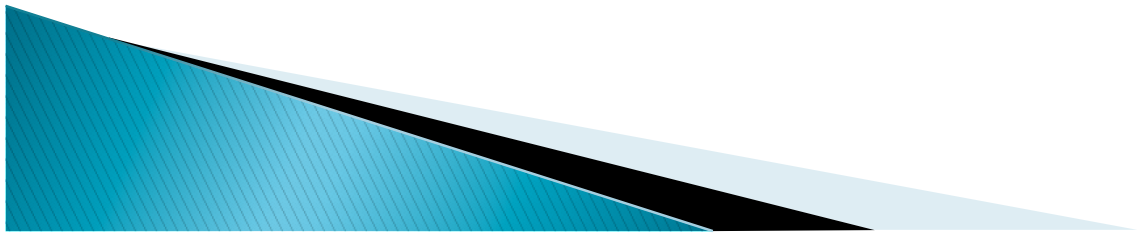
Grade 4 (34)

- Instructional time should focus on: (1) developing understanding and fluency with multi-digit multiplication, and dividing to find quotients involving multi-digit dividends; (2) developing an understanding of fraction equivalence, addition and subtraction of fractions with like denominators, and multiplication of fractions by whole numbers; (3) understanding that geometric figures can be analyzed and classified based on their properties, such as having parallel sides, perpendicular sides, particular angle measures, and symmetry.



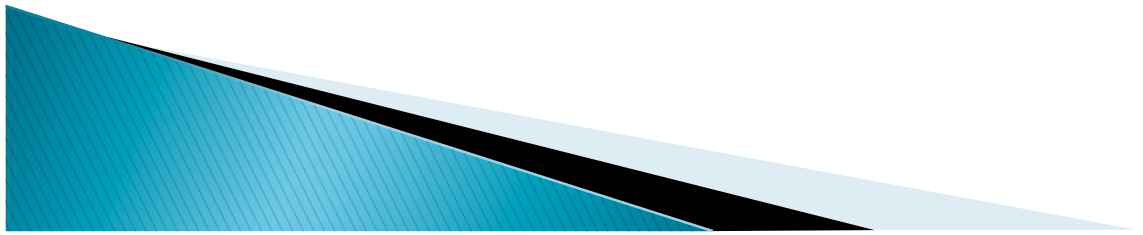
Grade 4

- Operations and Algebraic Thinking
- Number and Operations in Base Ten
- Number and Operations - Fractions
- Measurement and Data
- Geometry



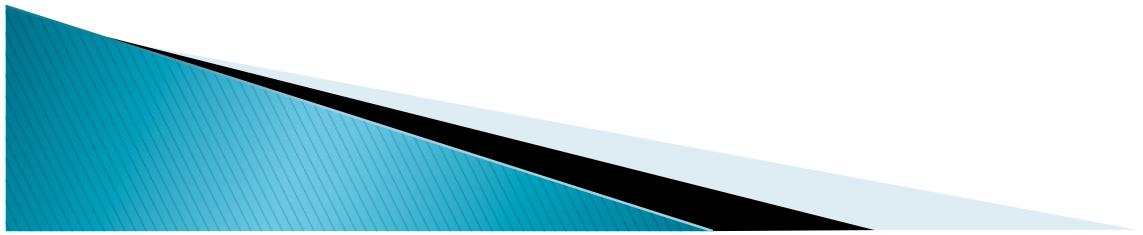
Grade 5 (33)

- Instructional time should focus on (1) developing fluency with addition and subtraction of fractions, and understanding of the multiplication and division of fractions in limited cases (unit fractions divided by whole numbers and whole numbers divided by unit fractions); (2) extending division to 2-digit divisors, integrating decimal fractions into the place value system and developing understanding of operations with decimals to hundredths, and developing fluency with whole number and decimal operations; and (3) developing understanding of volume.



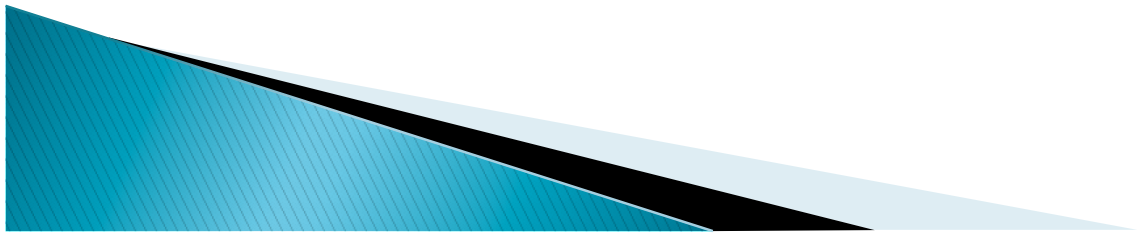
Grade 5

- Operations and Algebraic Thinking
- Number and Operations in Base Ten
- Number and Operations - Fractions
- Measurement and Data
- Geometry



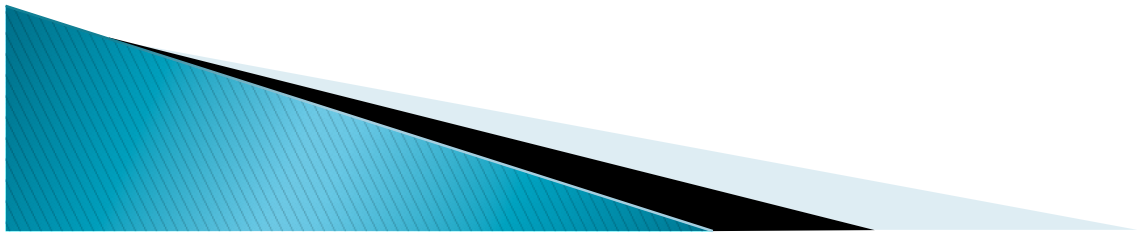
Grade 6 (42)

- Instructional time should focus on (1) connecting ratio and rate to whole number multiplication and division and using concepts of ratio and rate to solve problems; (2) completing understanding of division of fractions and extending the notion of number to the system of rational numbers, which includes negative numbers; (3) writing, interpreting, and using expressions and equations; and (4) developing understanding of statistical thinking.



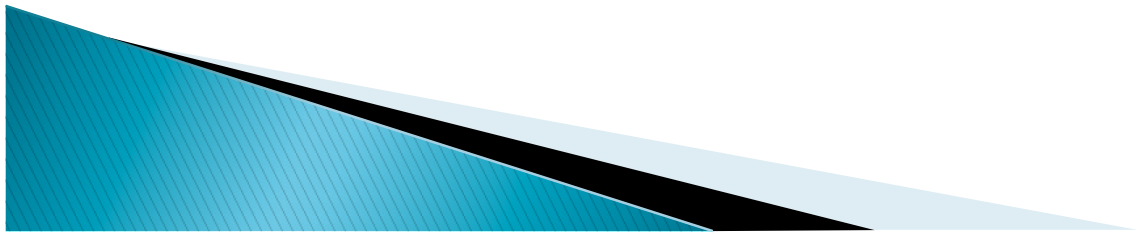
Grade 6

- Ratios and Proportional Relationships
- The Number System
- Expressions and Equations
- Geometry
- Statistics and Probability



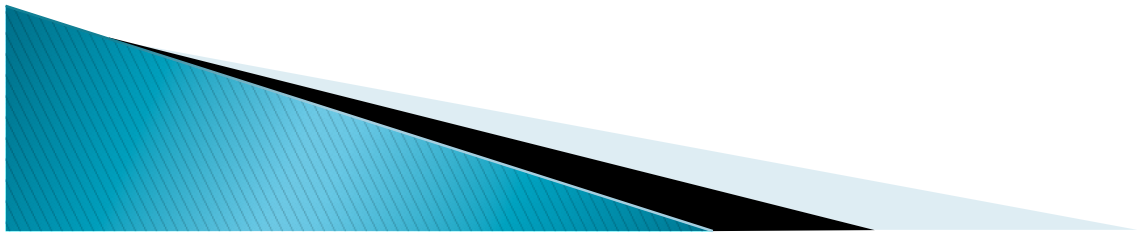
Grade 7 (37)

- Instructional time should focus on (1) developing understanding of and applying proportional relationships; (2) developing understanding of operations with rational numbers and working with expressions and linear equations; (3) solving problems involving scale drawings and informal geometric constructions, and working with two- and three-dimensional shapes to solve problems involving area, surface area, and volume; and (4) drawing inferences about populations based on samples.



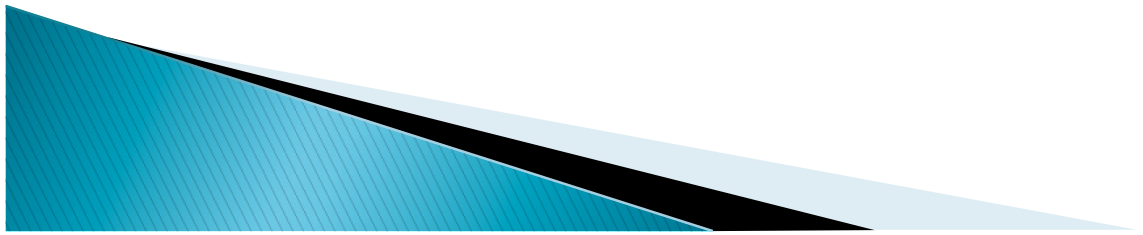
Grade 7

- Ratios and Proportional Relationships
- The Number System
- Expressions and Equations
- Geometry
- Statistics and Probability



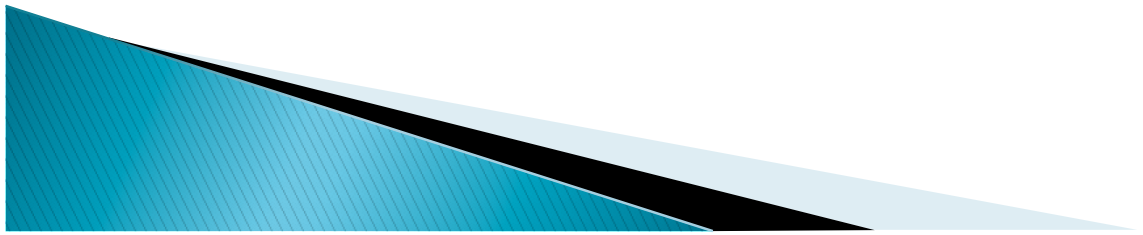
Grade 8 (33)

- Instructional time should focus on (1) formulating and reasoning about expressions and equations, including modeling an association in bivariate data with a linear equation, and solving linear equations and systems of linear equations; (2) grasping the concept of a function and using functions to describe quantitative relationships; (3) analyzing two- and three-dimensional space and figures using distance, angle, similarity, and congruence, and understanding and applying the Pythagorean Theorem.



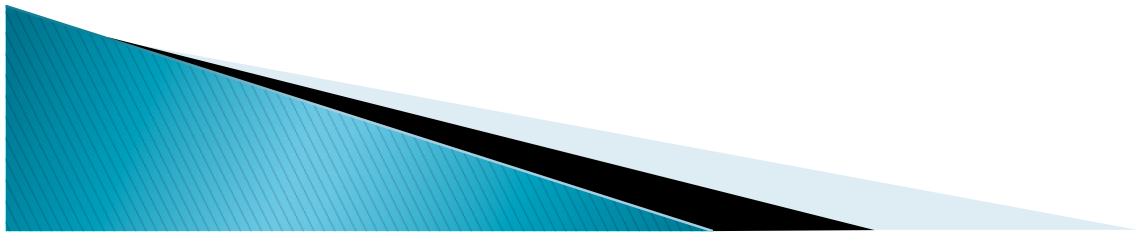
High School

- The high school standards are listed in conceptual categories:
  - Number and Quantity
  - Algebra
  - Functions
  - Modeling
  - Geometry
  - Statistics and Probability



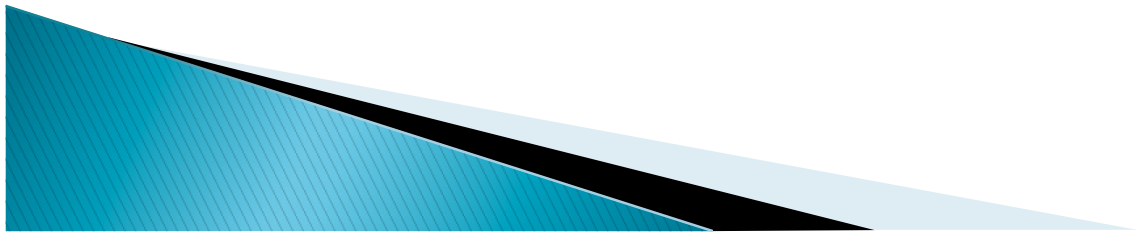
High School

- Algebra (31)
  - **Seeing Structure in Expressions**
  - **Arithmetic with Polynomials and Rational Expressions**
  - **Creating Equations**
  - **Reasoning with Equations and Inequalities**



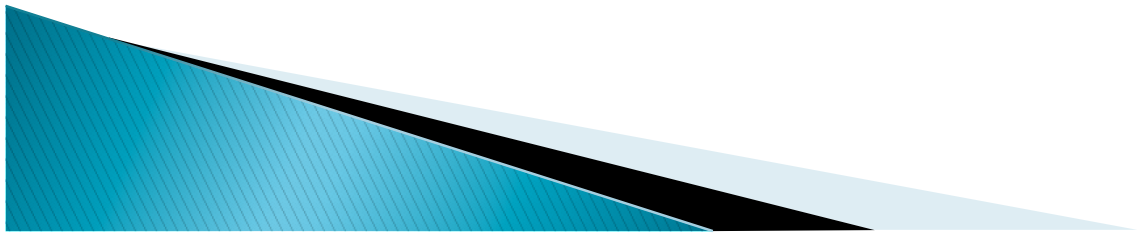
High School

- Functions (40)
  - **Interpreting Functions**
  - **Building Functions**
  - **Linear, Quadratic, and Exponential Models**
  - **Trigonometric Functions**



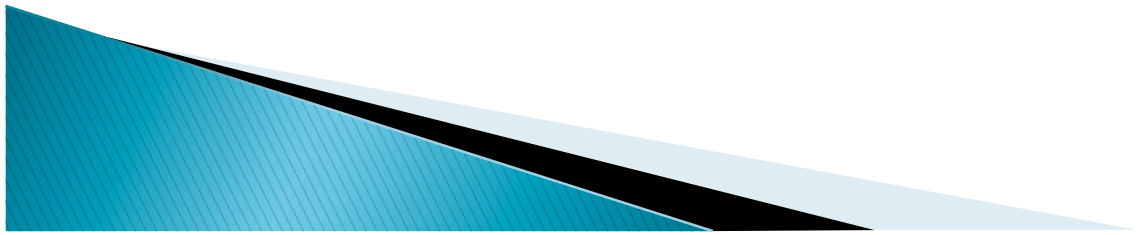
High School

- Modeling (appears in standards within other domains)



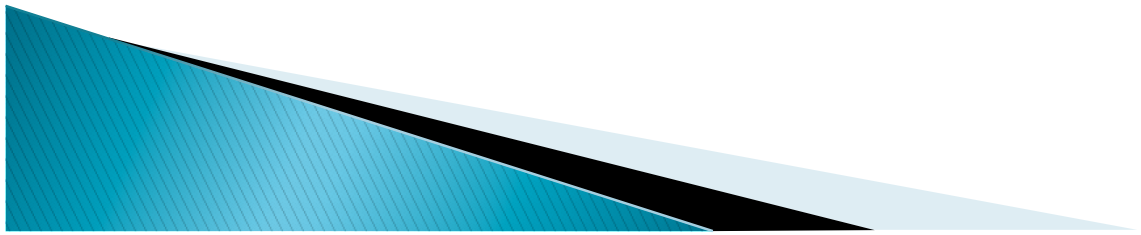
High School

- Geometry (44)
  - **Congruence**
  - **Similarity, Right Triangles, and Trigonometry**
  - **Circles**
  - **Expressing Geometric Properties with Equations**
  - **Geometric Measurement and Dimension**
  - **Modeling with Geometry**



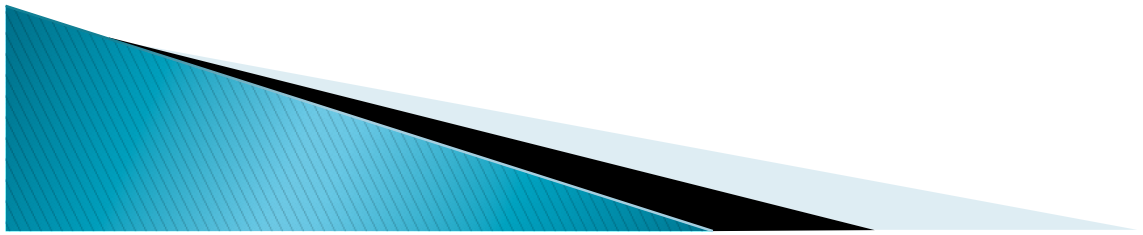
High School

- Statistics & Probability (34)
  - **Interpreting Categorical and Quantitative Data**
  - **Making Inferences and Justifying Conclusions**
  - **Conditional Probability and the Rules of Probability**
  - **Using Probability to Make Decisions**



Key Considerations for School Psychologists

- How best to support students who already struggle.
- Interpreting assessments – helping provide deeper understandings of the limits of assessments to assess CCSS performance.



http://brtprojects.org/

BRT
behavioral research & teaching

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Behavioral Research and Teaching

The projects at BRT concentrate on access to learning so that appropriate and accurate information can be collected from all students to improve decision-making. We focus on developing information systems with three primary goals:

- Improve basic skills assessments so that all students can read, write, and compute.
- Enhance learning of middle and secondary content subject matter so that all students have the opportunity to develop a broad knowledge base.
- Provide accessibility to large-scale testing so that all students can demonstrate their proficiencies on state and local achievement standards.

NEWS & UPDATES

- **New Middle School Mathematics Measures in Development** Feb, 2011

  We hope to have 900 new items written for each of grades 6-8 by the end of the year. All items are being written to align with the current draft of the Common Core Standards for Math.

- **Steppingstone Pilot Study**

  Dec, 2010

  BRT is piloting eight different forms each of four reading measures: Silent Reading Fluency Sentences, Silent Reading Fluency Maze,

CURRENT RESEARCH

- 1. Diagnostic Reading Progress Monitoring (DRPM) Scaling
- 2. RTI Progress Monitoring Case Study
- 3. Reading Measures Structure Analysis
- 4. Spanish Reading Tests Review and Pilot
- 5. easyCBM Reading Construct Validity
- 6. Middle School Math Item Scaling
- 7. easyCBM Beginning Reading Measures