Listing of Proposed Changes to the 2015 Mississippi College- and Career-Readiness Standards
(**Mathematics**)

Kindergarten				
Standard Identifier	Original Standard (May 2015)	Proposed Revision (December 2015)	APA Forum Feedback (December 2015 – January 2016)	MDE Response / Final Standard (January 2016)
K.CC.7	Compare two numbers between 1 and 10 presented as written numerals.	Compare two numbers between 1 and *20* presented as written numerals.		
K.OA.1	Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.	Represent addition and subtraction*, in which all parts and whole of the problem are within 10,* with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.		
K.OA.2	Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.	Solve addition and subtraction word problems *within 10 involving situations of adding to, taking from, putting together and taking apart with unknowns in all positions* by using objects or drawings to represent the problem.	After teaching Kindergarten and First grade as a looping teacher that missing addends or subtrahends are too abstract for Kindergarten and by First grade when that standard is tested again with unknowns in all positions they have a better understanding of the parts.	No change. Committee recommended this remain as an introduction to subsequent standards.

Kindergarten				
Standard Identifier	Original Standard (May 2015)	Proposed Revision (December 2015)	APA Forum Feedback (December 2015 – January 2016)	MDE Response / Final Standard (January 2016)
K.NBT.1	Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., 18 = 10 + 8); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.	Compose and decompose numbers from 11 to 19 into ten ones and some further ones *to understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones,* e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., 18 = 10 + 8).		
K.G.5	Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.	Model **objects** in the world by drawing and building two- and three-dimensional shapes.	Kindergarten students don't have enough abstract thought and fine motor skills based in art to draw a 3-d figure. Plus truly you can't draw a 3-d because even drawn it is flat and on the same plane. If we want our students to truly understand the wording in upper grades then we need to expect them using those same wordings in our standards and make sure we don't ask them to do or create something that in later grades will have them confused.	Revise this standard as outlined below. Model objects in the world by drawing two-dimensional shapes and building three-dimensional shapes.

		Grade 1		
Standard Identifier	Original Standard (May 2015)	Proposed Revision (December 2015)	APA Forum Feedback (December 2015 – January 2016)	MDE Response / Final Standard (January 2016)
New MS standards (and a split)	Tell and write time in hours and half-hours using analog and digital clocks.	**1.MD.3a**: Tell and write time in hours and half-hours using analog and digital clocks. **1.MD.3b:** Identify the days of the week, the number of days in a week, and the number of weeks in each month.		
New MS standard		**1.MD.5:** Identify the values of all U.S. coins and know their comparative values (e.g., a dime is of greater value than a nickel). Find equivalent values (e.g., a nickel is equivalent to 5 pennies). Use appropriate notation (e.g., 69¢)	I feel that saying ALL U.S. coins lends into half dollar, quarter dollar pieces, etc. I feel they need to master the commonly used coins well before introducing coins that they may or may not ever see. Also since we count by 1s, 2s, 5s, and 10s, I feel that counting like coins should be added into the standard. However, finding equivalent values should be limited to like coins and within 25. I feel it would be better if the coins were listed specifically. Will half dollar coins and dollar coins be included? Will they have to know the values of these coins as well?	Revise this standard as outlined below. **1.MD.5a:** Identify the value of all U.S. coins (penny, nickel, dime, quarter, half-dollar, and dollar coins). Use appropriate cent and dollar notation (e.g., 25¢, $1). **1.MD.5b:** Know the comparative values of all U.S. coins (e.g., a dime is of greater value than a nickel). **1.MD.5c:** Count like U.S. coins up to the equivalent of a dollar. **1.MD.5d:** Find the equivalent value for all greater value U.S. coins using like value smaller coins (e.g., 5 pennies equal 1 nickel; 10 pennies equal dime, but not 1 nickel and 5 pennies equal 1 dime).

		Grade 2		
Standard Identifier	Original Standard (May 2015)	Proposed Revision (December 2015)	APA Forum Feedback (December 2015 – January 2016)	MDE Response / Final Standard (January 2016)
2.NBT.2	Count within 1000; skip-count by 5s, 10s, and 100s.	Count within 1000; skip-count by 5s starting at any number ending in 5 or 0. Skip-count by 10s and 100s starting at any number.		
2.NBT.5	Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.	*Fluently* add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.		
2.OA.2	Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers.	*Fluently* add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers.		
New MS standards (and a split)	Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately. *Example: If you have 2 dimes and 3 pennies, how many cents do you have?*	**2.MD.8a:** Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately. *Example: If you have 2 dimes and 3 pennies, how many cents do you have?* **2.MD.8b**: *Fluently* use a calendar to answer simple real world problems such as "How many weeks are in a year?" or "James gets a $5 allowance every 2 months, how much money will he have at the end of each year?"		

			Grade 3		
Standard Identifier	**Original Standard (May 2015)**	**Proposed Revision (December 2015)**	**APA Forum Feedback (December 2015 – January 2016)**	**MDE Response / Final Standard (January 2016)**
3.OA.4	Determine the unknown whole number in a multiplication or division equation relating three whole numbers. *For example, determine the unknown number that makes the equation true in each of the equations 8 × ? = 48, 5 = ? ÷ 3, 6 × 6 = ?.*	Determine the unknown whole number in a multiplication or division equation relating three whole numbers, with factors 0-10. *For example, determine the unknown number that makes the equation true in each of the equations 8 × ? = 48, 5 = ? ÷ 3, 6 × 6 = ?.*		
3.OA.6	Understand division as an unknown-factor problem. *For example, find 32 ÷ 8 by finding the number that makes 32 when multiplied by 8.*	Understand division as an unknown-factor problem, where a remainder does not exist. *For example, find 32 ÷ 8 by finding the number that makes 32 when multiplied by 8 with no remainder*		
3.OA.7	Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that 8 × 5 = 40, one knows 40 ÷ 5 = 8) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.	***Fluently*** multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that 8 × 5 = 40, one knows 40 ÷ 5 = 8) or properties of operations. Know from memory all products of two one-digit numbers; and fully understand the concept when a remainder does not exist under division.		

Grade 3				
Standard Identifier	**Original Standard (May 2015)**	**Proposed Revision (December 2015)**	**APA Forum Feedback (December 2015 – January 2016)**	**MDE Response / Final Standard (January 2016)**
3.OA.8	Solve two-step word problems using the four operations. 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.	Solve two-step (two operational steps) word problems using the four operations. 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. Include problems with whole dollar amounts.		
3.NBT.2	Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.	*Fluently* add and subtract (including subtracting across zeros) within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction. Include problems with whole dollar amounts.		
3.NF.3a	Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line.	Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line. Recognize that comparisons are valid only when the two fractions refer to the same whole.		

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FINAL DRAFT

Grade 3				
Standard Identifier	Original Standard (May 2015)	Proposed Revision (December 2015)	APA Forum Feedback (December 2015 – January 2016)	MDE Response / Final Standard (January 2016)
3.G.1	Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.	Understand that shapes in different categories (e.g., rhombuses, rectangles, circles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.		
3.MD.7b	Multiply side lengths to find areas of rectangles with whole-number side lengths in the context of solving real world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning.	Multiply side lengths to find areas of rectangles with whole-number side lengths (where factors can be between 1 and 10, inclusively) in the context of solving real world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning.		
3.MD.7d	Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real world problems.	Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real world problems. *Recognize area as additive.*		

		Grade 3		
Standard Identifier	**Original Standard (May 2015)**	**Proposed Revision (December 2015)**	**APA Forum Feedback (December 2015 – January 2016)**	**MDE Response / Final Standard (January 2016)**
3.MD.8	Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.	Solve real world and mathematical problems involving perimeters of polygons, including: finding the perimeter given the side lengths, finding an unknown side length, and exhibiting *(including, but not limited to: modeling, drawing, designing, and creating)* rectangles with the same perimeter and different areas or with the same area and different perimeters.	Too wordy and confusing. The words all sound somewhat redundant.	No change. Committee recommended this remain in place to clarify what is required in student performance.

		Grade 4		
Standard Identifier	**Original Standard (May 2015)**	**Proposed Revision (December 2015)**	**APA Forum Feedback (December 2015 – January 2016)**	**MDE Response / Final Standard (January 2016)**
4.OA.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.	Solve multistep *(two or more operational steps)* 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.		
4.NBT.4	Fluently add and subtract multi-digit whole numbers using the standard algorithm.	***Fluently*** add and subtract *(including subtracting across zeros)* multi-digit whole numbers using the standard algorithm.		
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.	Recognizing that the value of "n" cannot be 0, 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.		

	Grade 4			
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4.NF.3b	Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation. Justify decompositions, e.g., by using a visual fraction model. *Examples: 3/8 = 1/8 + 1/8 + 1/8 ; 3/8 = 1/8 + 2/8 ; 2 1/8 = 1 + 1 + 1/8 = 8/8 + 8/8 + 1/8.*	Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation. Justify decompositions, e.g., by using a visual fraction model (including, but not limited to: concrete models, illustrations, tape diagram, number line, area model, etc.). *Examples: 3/8 = 1/8 + 1/8 + 1/8 ; 3/8 = 1/8 + 2/8 ; 2 1/8 = 1 + 1 + 1/8 = 8/8 + 8/8 + 1/8.*		
4.NF.4c	Solve word problems involving multiplication of a fraction by a whole number, e.g., by using visual fraction models and equations to represent the problem. *For example, if each person at a party will eat 3/8 of a pound of roast beef, and there will be 5 people at the party, how many pounds of roast beef will be needed? Between what two whole numbers does your answer lie?*	Solve word problems involving multiplication of a fraction by a whole number, e.g., by using visual fraction models and equations to represent the problem. *For example, if each person at a party will eat 3/8 of a pound of roast beef, and there will be 5 people at the party, how many pounds of roast beef will be needed? Between what two whole numbers do you expect your answer to lie?*		

	Grade 4			
Standard Identifier	**Original Standard (May 2015)**	**Proposed Revision (December 2015)**	**APA Forum Feedback (December 2015 – January 2016)**	**MDE Response / Final Standard (January 2016)**
4.MD.1	Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table. *For example, know that 1 ft is 12 times as long as 1 in. Express the length of a 4 ft snake as 48 in. Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36),…*	Know relative sizes of measurement units within one system of units including km, m, cm*, mm*; kg, g*, mg*; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table. *For example, know that 1 ft is 12 times as long as 1 in. Express the length of a 4 ft snake as 48 in. Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36),…*		
4.MD.2	Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.	Use the four operations to solve word problems involving · *intervals of time* · *money* · *distances* · *liquid volumes* · *masses of objects* including problems *involving simple fractions or decimals*, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.		

	Grade 4			
Standard Identifier	**Original Standard (May 2015)**	**Proposed Revision (December 2015)**	**APA Forum Feedback (December 2015 – January 2016)**	**MDE Response / Final Standard (January 2016)**
4.MD.7	Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real-world and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measure.	Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measure. *Example: Find the missing angle using an equation.*		

Grade 5				
Standard Identifier	Original Standard (May 2015)	Proposed Revision (December 2015)	APA Forum Feedback (December 2015 – January 2016)	MDE Response / Final Standard (January 2016)
5.NBT.1	Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left.	Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left (e.g., "In the number 3.33, the underlined digit represents 3/10, which is 10 times the amount represented by the digit to its right (3/100) and is 1/10 the amount represented by the digit to its left (3)).		
5.NBT.5	Fluently multiply multi-digit whole numbers using the standard algorithm.	Fluently multiply multi-digit whole numbers using the standard algorithm.		
5.NBT.7	Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.	Add, subtract, multiply, and divide decimals to hundredths, using concrete models (to include, but not limited to: base ten blocks, decimal tiles, etc.) or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.		

	Grade 5			
Standard Identifier	**Original Standard (May 2015)**	**Proposed Revision (December 2015)**	**APA Forum Feedback (December 2015 – January 2016)**	**MDE Response / Final Standard (January 2016)**
5.MD.1	Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problems.	Convert among different-sized standard measurement units within a given measurement system *(customary and metric)* (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problems.		

	Grade 6			
Standard Identifier	**Original Standard (May 2015)**	**Proposed Revision (December 2015)**	**APA Forum Feedback (December 2015 – January 2016)**	**MDE Response / Final Standard (January 2016)**
6.NS.2	Fluently divide multi-digit numbers using the standard algorithm.	***Fluently*** divide multi-digit numbers using the standard algorithm.		
6.NS.3	Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.	***Fluently*** add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.		
New MS Standard		***6.NS. 9***: *Apply and extend previous understandings of addition and subtraction to add and subtract integers; represent addition and subtraction on a horizontal or vertical number line diagram.* a. *Describe situations in which opposite quantities combine to make 0. For example, a hydrogen atom has 0 charge because its two constituents are oppositely charged.*		

Grade 6				
Standard Identifier	Original Standard (May 2015)	Proposed Revision (December 2015)	APA Forum Feedback (December 2015 – January 2016)	MDE Response / Final Standard (January 2016)
		b. *Understand p + q as the number located a distance |q| from p, in the positive or negative direction depending on whether q is positive or negative. Show that a number and its opposite have a sum of 0 (are additive inverses). Interpret sums of integers by describing real-world contexts.* c. *Understand subtraction of integers as adding the additive inverse, p – q = p + (–q). Show that the distance between two integers on the number line is the absolute value of their difference, and apply this principle in real-world contexts.* d. *Apply properties of operations as strategies to add and subtract integers.*		
6.EE.9	Use variables to represent two quantities in a real-world problem that change in relationship to one another; write an equation to express one quantity, thought of as the dependent variable, in terms of the other quantity, thought of as the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation. *For example, in a*	Use variables to represent two quantities in a real-world problem that change in relationship to one another. • *Write an equation to express one quantity, thought of as the dependent variable, in terms of the other quantity, thought of as the independent variable.* • *Analyze the relationship between the dependent and independent variables using*		

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	problem involving motion at constant speed, list and graph ordered pairs of distances and times, and write the equation d = 65t to represent the relationship between distance and time.	*graphs and tables, and relate these to the equation.* For example, in a problem involving motion at constant speed, list and graph ordered pairs of distances and times, and write the equation d = 65t to represent the relationship between distance and time.		
6.SP.5c	Giving quantitative measures of center (median and/or mean) and variability (interquartile range and/or mean absolute deviation), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered.	Giving quantitative measures of center (median and/or mean) and variability (interquartile range ~~and/or mean absolute deviation~~), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered.		

		Grade 7		
Standard Identifier	**Original Standard (May 2015)**	**Proposed Revision (December 2015)**	**APA Forum Feedback (December 2015 – January 2016)**	**MDE Response / Final Standard (January 2016)**
7.EE.4a	Solve word problems leading to equations of the form *px + q = r* and *p(x + q) = r*, where *p*, *q*, and *r* are specific rational numbers. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach. *For example, the perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width?*	Solve word problems leading to equations of the form *px + q = r* and *p(x + q) = r*, where *p*, *q*, and *r* are specific rational numbers. Solve equations of these forms ***fluently***. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach. *For example, the perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width?*		
7.SP.3	Informally assess the degree of visual overlap of two numerical data distributions with similar variabilities, measuring the difference between the centers by expressing it as a multiple of a measure of variability. *For example, the mean height of players on the basketball team is 10 cm greater than the mean height of players on the soccer team, about twice the variability (mean absolute deviation) on either team; on a dot plot, the separation between the two distributions of heights is noticeable.*	Informally assess the degree of visual overlap of two numerical data distributions with similar variabilities, measuring the difference between the centers by expressing it as a multiple of a measure of variability. *For example, the mean height of players on the basketball team is 10 cm greater than the mean height of players on the soccer team, about twice the variability on either team (mean absolute deviation); on a dot plot, the separation between the two distributions of heights is noticeable.*		

Grade 7				
Standard Identifier	Original Standard (May 2015)	Proposed Revision (December 2015)	APA Forum Feedback (December 2015 – January 2016)	MDE Response / Final Standard (January 2016)
7.SP.4	Use measures of center and measures of variability for numerical data from random samples to draw informal comparative inferences about two populations. *For example, decide whether the words in a chapter of a seventh-grade science book are generally longer than the words in a chapter of a fourth-grade science book.*	Use measures of center and measures of variability (i.e. inter-quartile range) for numerical data from random samples to draw informal comparative inferences about two populations. *For example, decide whether the words in a chapter of a seventh-grade science book are generally longer than the words in a chapter of a fourth-grade science book.*		

Grade 8				
Standard Identifier	Original Standard (May 2015)	Proposed Revision (December 2015)	APA Forum Feedback (December 2015 – January 2016)	MDE Response / Final Standard (January 2016)
8.EE.7b	Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms.	Solve linear equations *and inequalities* with rational number coefficients, including *those* whose solutions require expanding expressions using the distributive property and collecting like terms.		

	Compacted Mathematics Grade 7			
	-Compacted Mathematics Grade 7 consists of content from the Grade 7 Math and Grade 8 Math courses.- -The information provided below indicates proposed revisions to standards that will impact this course.-			
Standard Identifier	Original Standard (May 2015)	Proposed Revision (December 2015)	APA Forum Feedback (December 2015 – January 2016)	MDE Response / Final Standard (January 2016)
7.EE.4a	Solve word problems leading to equations of the form *px + q = r* and *p(x + q) = r*, where *p*, *q*, and *r* are specific rational numbers. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach. *For example, the perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width?*	Solve word problems leading to equations of the form *px + q = r* and *p(x + q) = r*, where *p*, *q*, and *r* are specific rational numbers. Solve equations of these forms ***fluently***. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach. *For example, the perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width?*		
7.SP.3	Informally assess the degree of visual overlap of two numerical data distributions with similar variabilities, measuring the difference between the centers by expressing it as a multiple of a measure of variability. *For example, the mean height of players on the basketball team is 10 cm greater than the mean height of players on the soccer team, about twice the variability (mean absolute deviation) on either team; on a dot plot, the separation between the two distributions of heights is noticeable.*	Informally assess the degree of visual overlap of two numerical data distributions with similar variabilities, measuring the difference between the centers by expressing it as a multiple of a measure of variability. *For example, the mean height of players on the basketball team is 10 cm greater than the mean height of players on the soccer team, about twice the variability on either team (mean absolute deviation); on a dot plot, the separation between the two distributions of heights is noticeable.*		

Compacted Mathematics Grade 7

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-The information provided below indicates proposed revisions to standards that will impact this course.-

Standard Identifier	Original Standard (May 2015)	Proposed Revision (December 2015)	APA Forum Feedback (December 2015 – January 2016)	MDE Response / Final Standard (January 2016)
7.SP.4	Use measures of center and measures of variability for numerical data from random samples to draw informal comparative inferences about two populations. *For example, decide whether the words in a chapter of a seventh-grade science book are generally longer than the words in a chapter of a fourth-grade science book.*	Use measures of center and measures of variability (i.e. inter-quartile range) for numerical data from random samples to draw informal comparative inferences about two populations. *For example, decide whether the words in a chapter of a seventh-grade science book are generally longer than the words in a chapter of a fourth-grade science book.*		
8.EE.7b	Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms.	Solve linear equations and inequalities with rational number coefficients, including those whose solutions require expanding expressions using the distributive property and collecting like terms.		

Compacted Mathematics Grade 8 with Integrated Math I

-Compacted Mathematics Grade 8 with Integrated Math I consists of content from the Grade 8 Mathematics & Integrated Math I courses.-
-The information provided below indicates proposed revisions to standards that will impact this course.-

Standard Identifier	Original Standard (May 2015)	Proposed Revision (December 2015)	APA Forum Feedback (December 2015 – January 2016)	MDE Response / Final Standard (January 2016)
Grade 8	NONE	NONE		
A-REI.6	Solve systems of linear equations exactly and approximately (e.g., with graphs), focusing on pairs of linear equations in two variables.	Solve systems of linear equations algebraically, exactly, approximately, and graphically while focusing on pairs of linear equations in two variables.		
A-CED.2	Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.	Create equations in two variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.		

Compacted Mathematics Grade 8 with Algebra I

-Compacted Mathematics Grade 8 with Algebra I consists of content from the Grade 8 mathematics and Algebra I courses.-
-The information provided below indicates proposed revisions to standards that will impact this course.-

Standard Identifier	Original Standard (May 2015)	Proposed Revision (December 2015)	APA Forum Feedback (December 2015 – January 2016)	MDE Response / Final Standard (January 2016)
Grade 8	NONE	NONE		
N-RN.3	Explain why the sum or product of two rational numbers is rational; that the sum of a rational number and an irrational number is irrational; and that the product of a nonzero rational number and an irrational number is irrational.	Explain why: • the sum or product of two rational numbers is rational; • the sum of a rational number and an irrational number is irrational; and • the product of a nonzero rational number and an irrational number is irrational.		

Compacted Mathematics Grade 8 with Algebra I

Standard Identifier	Original Standard (May 2015)	Proposed Revision (December 2015)	APA Forum Feedback (December 2015 – January 2016)	MDE Response / Final Standard (January 2016)
N-Q.2	Define appropriate quantities for the purpose of descriptive modeling.	Define appropriate quantities for the purpose of descriptive modeling. *[Footnote added: Refer to Quantities section of High School Number and Quantity Conceptual Category.]*		
A-APR.3	Identify zeros of polynomials when suitable factorizations are available, and use the zeros to construct a rough graph of the function defined by the polynomial.	Identify zeros of polynomials when suitable factorizations are available, and use the zeros to construct a rough graph of the function defined by the polynomial *(limit to 1st- and 2nd-degree polynomials)*.		
A-CED.2	Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.	Create equations in *two variables* to represent relationships between quantities; graph equations on coordinate axes with labels and scales.		
A-REI.4b	Solve quadratic equations by inspection (e.g., for $x^2 = 49$), taking square roots, completing the square, the quadratic formula and factoring, as appropriate to the initial form of the equation. Recognize when the quadratic formula gives complex solutions and write them as $a \pm bi$ for real numbers a and b.	Solve quadratic equations by inspection (e.g., for $x^2 = 49$), taking square roots, completing the square, the quadratic formula and factoring, as appropriate to the initial form of the equation. Recognize when the quadratic formula gives complex solutions ~~and write them as $a \pm bi$ for real numbers a and b~~.		

Compacted Mathematics Grade 8 with Algebra I

Standard Identifier	Original Standard (May 2015)	Proposed Revision (December 2015)	APA Forum Feedback (December 2015 – January 2016)	MDE Response / Final Standard (January 2016)
A-REI.5	Prove that, given a system of two equations in two variables, replacing one equation by the sum of that equation and a multiple of the other produces a system with the same solutions.	Given a system of two equations in two variables, *show and explain why the sum of equivalent forms of the equations produces the same solution as the original system.*		
A-REI.6	Solve systems of linear equations exactly and approximately (e.g., with graphs), focusing on pairs of linear equations in two variables.	Solve systems of linear equations algebraically, exactly, ~~approximately~~, and graphically while focusing on pairs of linear equations in two variables.		
A-REI.11	Explain why the x-coordinates of the points where the graphs of the equations $y = f(x)$ and $y = g(x)$ intersect are the solutions of the equation $f(x) = g(x)$; find the solutions approximately, e.g., using technology to graph the functions, make tables of values, or find successive approximations. Include cases where (x) and/or (x) are linear, polynomial, rational, absolute value, exponential, and logarithmic functions.	Explain why the x-coordinates of the points where the graphs of the equations $y = f(x)$ and $y = g(x)$ intersect are the solutions of the equation $f(x) = g(x)$; find the solutions approximately, e.g., using technology to graph the functions, make tables of values, or find successive approximations. Include cases where $f(x)$ and/or $g(x)$ are linear, *rational, absolute value, and exponential functions*.	I would rather the standard include quadratic functions instead of rational functions to give students more opportunity to re-visit the work that has been previously done with parabolas. I think rational functions, along with their horizontal and vertical asymptotes should be an Algebra 2 topic. This allows Algebra 1 to retain its focus on linear, quadratic, and exponential functions.	Explain why the x-coordinates of the points where the graphs of the equations $y = f(x)$ and $y = g(x)$ intersect are the solutions of the equation $f(x) = g(x)$; find the solutions approximately, e.g., using technology to graph the functions, make tables of values, or find successive approximations. Include cases where (x) and/or $g(x)$ are linear, quadratic, absolute value, and exponential functions.
F-IF.3	Recognize that sequences are functions, sometimes defined recursively, whose domain is a subset of the integers.	Recognize that sequences are *functions whose* domain is a subset of the integers.		

	Compacted Mathematics Grade 8 with Algebra I			
	-Compacted Mathematics Grade 8 with Algebra I consists of content from the Grade 8 mathematics and Algebra I courses.- -The information provided below indicates proposed revisions to standards that will impact this course.-			
Standard Identifier	Original Standard (May 2015)	Proposed Revision (December 2015)	APA Forum Feedback (December 2015 – January 2016)	MDE Response / Final Standard (January 2016)
F-IF.7a	Graph linear and quadratic functions and show intercepts, maxima, and minima.	Graph *functions (linear and quadratic)* and show intercepts, maxima, and minima.		
F-IF.7b	Graph square root, cube root, and piecewise-defined functions, including step functions and absolute value functions.	Graph square root, ~~cube root~~, and piecewise-defined functions, including ~~step functions~~ and absolute value functions.		
F-BF.1a	Write a function that describes a relationship between two quantities. a. Determine an explicit expression, a recursive process, or steps for calculation from a context.	Write a function that describes a relationship between two quantities. a. Determine an explicit *expression or* steps for calculation from a context.		
F-LE.3	Observe using graphs and tables that a quantity increasing exponentially eventually exceeds a quantity increasing linearly, quadratically, or (more generally) as a polynomial function.	This standard is **removed** from the Algebra I course.		
S-ID.1	Represent data with plots on the real number line (dot plots, histograms, and box plots).	Represent *and analyze* data with plots on the real number line (dot plots, histograms, and box plots)		

	Algebra I			
Standard Identifier	**Original Standard (May 2015)**	**Proposed Revision (December 2015)**	**APA Forum Feedback (December 2015 – January 2016)**	**MDE Response / Final Standard (January 2016)**
N-RN.3	Explain why the sum or product of two rational numbers is rational; that the sum of a rational number and an irrational number is irrational; and that the product of a nonzero rational number and an irrational number is irrational.	Explain why: • *the sum or product of two rational numbers is rational;* • *the sum of a rational number and an irrational number is irrational; and* • *the product of a nonzero rational number and an irrational number is irrational.*		
N-Q.2	Define appropriate quantities for the purpose of descriptive modeling.	Define appropriate quantities for the purpose of descriptive modeling. *[Footnote added: Refer to Quantities section of High School Number and Quantity Conceptual Category.]*		
A-APR.3	Identify zeros of polynomials when suitable factorizations are available, and use the zeros to construct a rough graph of the function defined by the polynomial.	Identify zeros of polynomials when suitable factorizations are available, and use the zeros to construct a rough graph of the function defined by the polynomial *(limit to 1st- and 2nd-degree polynomials)*.		
A-CED.2	Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.	Create equations in *two variables* to represent relationships between quantities; graph equations on coordinate axes with labels and scales.		

	Algebra I			
Standard Identifier	**Original Standard (May 2015)**	**Proposed Revision (December 2015)**	**APA Forum Feedback (December 2015 – January 2016)**	**MDE Response / Final Standard (January 2016)**
A-REI.4b	Solve quadratic equations by inspection (e.g., for $x^2 = 49$), taking square roots, completing the square, the quadratic formula and factoring, as appropriate to the initial form of the equation. Recognize when the quadratic formula gives complex solutions and write them as $a \pm bi$ for real numbers a and b.	Solve quadratic equations by inspection (e.g., for $x^2 = 49$), taking square roots, completing the square, the quadratic formula and factoring, as appropriate to the initial form of the equation. Recognize when the quadratic formula gives complex solutions ~~and write them as $a \pm bi$ for real numbers a and b~~.		
A-REI.5	Prove that, given a system of two equations in two variables, replacing one equation by the sum of that equation and a multiple of the other produces a system with the same solutions.	Given a system of two equations in two variables, *show and explain why the sum of equivalent forms of the equations produces the same solution as the original system.*		
A-REI.6	Solve systems of linear equations exactly and approximately (e.g., with graphs), focusing on pairs of linear equations in two variables.	Solve systems of linear equations algebraically, exactly, ~~approximately~~, and graphically while focusing on pairs of linear equations in two variables.		

	Algebra I			
Standard Identifier	**Original Standard (May 2015)**	**Proposed Revision (December 2015)**	**APA Forum Feedback (December 2015 – January 2016)**	**MDE Response / Final Standard (January 2016)**
A-REI.11	Explain why the *x*-coordinates of the points where the graphs of the equations $y = f(x)$ and $y = g(x)$ intersect are the solutions of the equation $f(x) = g(x)$; find the solutions approximately, e.g., using technology to graph the functions, make tables of values, or find successive approximations. Include cases where (x) and/or (x) are linear, polynomial, rational, absolute value, exponential, and logarithmic functions.	Explain why the *x*-coordinates of the points where the graphs of the equations $y = f(x)$ and $y = g(x)$ intersect are the solutions of the equation $f(x) = g(x)$; find the solutions approximately, e.g., using technology to graph the functions, make tables of values, or find successive approximations. Include cases where $f(x)$ and/or $g(x)$ are linear, *rational, absolute value, and exponential functions*.	I would rather the standard include quadratic functions instead of rational functions to give students more opportunity to re-visit the work that has been previously done with parabolas. I think rational functions, along with their horizontal and vertical asymptotes should be an Algebra 2 topic. This allows Algebra 1 to retain its focus on linear, quadratic, and exponential functions.	Explain why the *x*-coordinates of the points where the graphs of the equations $y = f(x)$ and $y = g(x)$ intersect are the solutions of the equation $f(x) = g(x)$; find the solutions approximately, e.g., using technology to graph the functions, make tables of values, or find successive approximations. Include cases where (x) and/or (x) are linear, quadratic, absolute value, and exponential functions.
F-IF.3	Recognize that sequences are functions, sometimes defined recursively, whose domain is a subset of the integers.	Recognize that sequences are *functions whose* domain is a subset of the integers.		
F-IF.7a	Graph linear and quadratic functions and show intercepts, maxima, and minima.	Graph *functions (linear and quadratic)* and show intercepts, maxima, and minima.		
F-IF.7b	Graph square root, cube root, and piecewise-defined functions, including step functions and absolute value functions.	Graph square root, ~~cube root~~, and piecewise-defined functions, including ~~step functions~~ and absolute value functions.		
F-BF.1a	Write a function that describes a relationship between two quantities. a. Determine an explicit expression, a recursive process, or steps for calculation from a context.	Write a function that describes a relationship between two quantities. a. Determine an explicit expression or steps for calculation from a context.		

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FINAL DRAFT

Algebra I

Standard Identifier	Original Standard (May 2015)	Proposed Revision (December 2015)	APA Forum Feedback (December 2015 – January 2016)	MDE Response / Final Standard (January 2016)
F-LE.3	Observe using graphs and tables that a quantity increasing exponentially eventually exceeds a quantity increasing linearly, quadratically, or (more generally) as a polynomial function.	This standard is **removed** from the Algebra I course.		
S-ID.1	Represent data with plots on the real number line (dot plots, histograms, and box plots).	Represent *and analyze* data with plots on the real number line (dot plots, histograms, and box plots)		

Algebra II

Standard Identifier	Original Standard (May 2015)	Proposed Revision (December 2015)	APA Forum Feedback (December 2015 – January 2016)	MDE Response / Final Standard (January 2016)
A-CED.2	Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.	This standard is **added to** the Algebra II course. Note that in Algebra I (the previous course), the standard omits the concept of "<u>or more variables</u>."		
A-CED.3	Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or non-viable options in a modeling context.	This standard is **added to the** Algebra II course.		

Algebra II

Standard Identifier	Original Standard (May 2015)	Proposed Revision (December 2015)	APA Forum Feedback (December 2015 – January 2016)	MDE Response / Final Standard (January 2016)
A-REI.6	Solve systems of linear equations exactly and approximately (e.g., with graphs), focusing on pairs of linear equations in two variables.	Solve systems of linear equations algebraically, exactly, approximately, and graphically while focusing on pairs of linear equations in two variables.		
F-TF.5	Choose trigonometric functions to model periodic phenomena with specified amplitude, frequency, and midline.	This standard is **removed** from Algebra II and placed in the Algebra III and Advanced Mathematics Plus courses.		
F-TF.8	Prove the Pythagorean identity sin $(\Theta)^2$ + cos $(\Theta)^2$ = 1 and use it to find sin (Θ), cos (Θ), or tan (Θ), given sin (Θ), cos (Θ), or tan (Θ) and the quadrant of the angle.	This standard is **removed** from Algebra II and placed in the Algebra III course.		
F-LE.3	Observe using graphs and tables that a quantity increasing exponentially eventually exceeds a quantity increasing linearly, quadratically, or (more generally) as a polynomial function.	This standard is **added to** the Algebra II course.		

Integrated Math I

Standard Identifier	Original Standard (May 2015)	Proposed Revision (December 2015)	APA Forum Feedback (December 2015 – January 2016)	MDE Response / Final Standard (January 2016)
A-REI.6	Solve systems of linear equations exactly and approximately (e.g., with graphs), focusing on pairs of linear equations in two variables.	Solve systems of linear equations algebraically, exactly, approximately, and graphically while focusing on pairs of linear equations in two variables.		

Integrated Math I

Standard Identifier	Original Standard (May 2015)	Proposed Revision (December 2015)	APA Forum Feedback (December 2015 – January 2016)	MDE Response / Final Standard (January 2016)
A-CED.2	Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.	Create equations in *two variables* to represent relationships between quantities; graph equations on coordinate axes with labels and scales.		

Integrated Math II

Standard Identifier	Original Standard (May 2015)	Proposed Revision (December 2015)	APA Forum Feedback (December 2015 – January 2016)	MDE Response / Final Standard (January 2016)
A-CED.3	Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or non-viable options in a modeling context.	This standard is **added to** the Integrated Math II courses.		
A-REI.6	Solve systems of linear equations exactly and approximately (e.g., with graphs), focusing on pairs of linear equations in two variables.	This standard is **added to** the Integrated Math II course and revised shown here: Solve systems of linear equations algebraically, exactly, ~~approximately~~, and graphically while focusing on pairs of linear equations in two variables.		

Integrated Math III

Standard Identifier	Original Standard (May 2015)	Proposed Revision (December 2015)	APA Forum Feedback (December 2015 – January 2016)	MDE Response / Final Standard (January 2016)
None	None	None		

Geometry

Standard Identifier	Original Standard (May 2015)	Proposed Revision (December 2015)	APA Forum Feedback (December 2015 – January 2016)	MDE Response / Final Standard (January 2016)
None	None	None		

Calculus

Standard Identifier	Original Standard (May 2015)	Proposed Revision (December 2015)	APA Forum Feedback (December 2015 – January 2016)	MDE Response / Final Standard (January 2016)
None	None	None		

Foundations of Algebra

Standard Identifier	Original Standard (May 2015)	Proposed Revision (December 2015)	APA Forum Feedback (December 2015 – January 2016)	MDE Response / Final Standard (January 2016)
None	None	None		

SREB Math Ready

Standard Identifier	Original Standard (May 2015)	Proposed Revision (December 2015)	APA Forum Feedback (December 2015 – January 2016)	MDE Response / Final Standard (January 2016)
None	None	None		

Advanced Placement (AP) Calculus AB/BC

Standard Identifier	Original Standard (May 2015)	Proposed Revision (December 2015)	APA Forum Feedback (December 2015 – January 2016)	MDE Response / Final Standard (January 2016)
None	None	None		

Advanced Placement (AP) Statistics

Standard Identifier	Original Standard (May 2015)	Proposed Revision (December 2015)	APA Forum Feedback (December 2015 – January 2016)	MDE Response / Final Standard (January 2016)
None	None	None		

Advanced Mathematics Plus				
Standard Identifier	Original Standard (May 2015)	Proposed Revision (December 2015)	APA Forum Feedback (December 2015 – January 2016)	MDE Response / Final Standard (January 2016)
F-TF.5	Choose trigonometric functions to model periodic phenomena with specified amplitude, frequency, and midline.	This standard is **added to** the Advanced Mathematics Plus course.		

Algebra III				
Standard Identifier	Original Standard (May 2015)	Proposed Revision (December 2015)	APA Forum Feedback (December 2015 – January 2016)	MDE Response / Final Standard (January 2016)
F-TF.5	Choose trigonometric functions to model periodic phenomena with specified amplitude, frequency, and midline.	This standard is **added to** the Algebra III course.		
F-TF.8	Prove the Pythagorean identity sin $(\Theta)^2$ + cos $(\Theta)^2$ = 1 and use it to find sin (Θ), cos (Θ), or tan (Θ), given sin (Θ), cos (Θ), or tan (Θ) and the quadrant of the angle.	This standard is **added to** the Algebra III course.		

Fluency/Fluently Defined

An emphasis on fluency has also been proposed for key standards in the *2015 Mississippi College- and Career-Readiness Standards (MS CCRS) for Mathematics*.   As a result, the following information is proposed for inclusion in the 2016 MS CCRS for Mathematics:

Throughout the *2016 Mississippi College- and Career-Readiness Standards for Mathematics* Grades K-5 standards, the words fluency and fluently will appear in bold, italicized, and underlined font (for example: *fluently*).   With respect to student performance <u>and</u> effective in-class instruction, the expectations for mathematical fluency are explained below:

Fluency is not meant to come at the expense of understanding, but is an outcome of a progression of learning and sufficient thoughtful practice. It is important to provide the conceptual building blocks that develop understanding in tandem with skill along the way to fluency; the roots of this conceptual understanding often extend one or more grades earlier in the standards than the grade when fluency is finally expected.

Wherever the word <u>fluently</u> appears in a MS CCR content standard, the word means quickly and accurately. It is important to understand that this is not explicitly tied to assessment purposes, but means more or less the same as when someone is said to be fluent in a foreign language. To be fluent is to flow: Fluent isn't halting, stumbling, or reversing oneself.

A key aspect of fluency in this sense is that it is not something that happens all at once in a single grade, but requires attention to student understanding along the way. It is important to ensure that sufficient practice and extra support are provided at each grade to allow all students to meet the standards that call explicitly for fluency.

Glossary

To provide additional clarity to content standards and key concepts in Grades K-12 for both students and teachers, thirty-two (32) vocabulary words have been **added to** the *2015 Mississippi College- and Career-Readiness Standards (MS CCRS) for Mathematics* Glossary. The following terms and their corresponding definitions are proposed for inclusion in the 2016 MS CCRS for Mathematics:

- *Absolute value*
- *Addend*
- *Algebra*
- *Coefficient*
- *Constant*
- *Difference*
- *Dilation*
- *Dividend*
- *Divisor*
- *Measures of Center*
- *Measures of Variability*
- *Minuend*
- *Mode*
- *Polygon*
- *Product*
- *Quadrilateral*
- *Qualitative Data*
- *Quality*

- *Quantitative Data*
- *Quantity*
- *Quotient*
- *Rectangle*
- *Reflection*
- *Rhombus*
- *Rotation*
- *Square*
- *Subtrahend*
- *Sum*
- *Term*
- *Translation*
- *Trapezoid*
- *Variable*

Kindergarten				
Standard Identifier	**Original Standard (May 2015)**	**Proposed Revision (December 2015)**	**APA Forum Feedback (December 2015 – January 2016)**	**MDE Response / Final Standard (January 2016)**
L.K.1	Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.	Demonstrate command of the conventions of standard English grammar and usage when writing (printing or keyboarding) or speaking.		

Grade 1				
Standard Identifier	**Original Standard (May 2015)**	**Proposed Revision (December 2015)**	**APA Forum Feedback (December 2015 – January 2016)**	**MDE Response / Final Standard (January 2016)**
L.1.1	Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.	Demonstrate command of the conventions of standard English grammar and usage when writing (printing or keyboarding) or speaking.		

Grade 2				
Standard Identifier	**Original Standard (May 2015)**	**Proposed Revision (December 2015)**	**APA Forum Feedback (December 2015 – January 2016)**	**MDE Response / Final Standard (January 2016)**
L.2.1	Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.	Demonstrate command of the conventions of standard English grammar and usage when writing (printing, cursive, or keyboarding) or speaking.		

Grade 3

Standard Identifier	Original Standard (May 2015)	Proposed Revision (December 2015)	APA Forum Feedback (December 2015 – January 2016)	MDE Response / Final Standard (January 2016)
L.3.1	Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.	Demonstrate command of the conventions of standard English grammar and usage when writing (printing, cursive, or keyboarding) or speaking.		

Grade 4

Standard Identifier	Original Standard (May 2015)	Proposed Revision (December 2015)	APA Forum Feedback (December 2015 – January 2016)	MDE Response / Final Standard (January 2016)
W.4.6	With some guidance and support from adults, use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of one page in a single sitting.	With some guidance and support from adults, use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills. to type a minimum of one page in a single sitting. (deleted)		
L.4.1	Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.	Demonstrate command of the conventions of standard English grammar and usage when writing (printing, cursive, or keyboarding) or speaking.		

	Grade 5			
Standard Identifier	**Original Standard (May 2015)**	**Proposed Revision (December 2015)**	**APA Forum Feedback (December 2015 – January 2016)**	**MDE Response / Final Standard (January 2016)**
W.5.6	With some guidance and support from adults, use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of one page in a single sitting.	With some guidance and support from adults, use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills. to type a minimum of one page in a single sitting. (deleted)		
L.5.1	Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.	Demonstrate command of the conventions of standard English grammar and usage when writing (printing, cursive, or keyboarding) or speaking.		

	Grade 6			
Standard Identifier	**Original Standard (May 2015)**	**Proposed Revision (December 2015)**	**APA Forum Feedback (December 2015 – January 2016)**	**MDE Response / Final Standard (January 2016)**
RL.6.2	Determine a theme or central idea of a text and how it is conveyed through particular details; provide a summary of the text distinct from personal opinions or judgments.	Determine a theme or central idea of a text and how it is conveyed through particular details; provide a summary of the text based upon this determination.	Revise standard to read: Determine a theme or central idea of a text and how it is conveyed through particular details; provide a summary of the text based on the determination of the theme or central idea free from personal opinions or judgments.	No action. Committee recommended leaving as is because the term "summary" indicates that the language is free from personal judgement.
RL.6.3	Describe how a particular story's or drama's plot unfolds in a series of episodes as well as how the characters respond or change as the plot moves toward a resolution.	Describe how the plot of a literary text unfolds in a series of episodes as well as how the characters respond or change as the plot moves toward a resolution.		

			Grade 6		

Standard Identifier	Original Standard (May 2015)	Proposed Revision (December 2015)	APA Forum Feedback (December 2015 – January 2016)	MDE Response / Final Standard (January 2016)
W.6.6	Use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of three pages in a single sitting.	Use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills. to type a minimum of three pages in a single sitting. (deleted)		
W.6.9a	Apply grade 6 Reading standards to literature (e.g., "Compare and contrast texts in different forms or genres [e.g., stories and poems; historical novels and fantasy stories] in terms of their approaches to similar themes and topics").	Apply grade 6 Reading standards to literary texts (e.g., "Compare and contrast texts in different forms or genres [e.g., stories and poems; historical novels and fantasy stories] in terms of their approaches to similar themes and topics").		
W.6.9b	Apply grade 6 Reading standards to literary nonfiction (e.g., "Trace and evaluate the argument and specific claims in a text, distinguishing claims that are supported by reasons and evidence from claims that are not").	Apply grade 6 Reading standards to informational texts, including literary nonfiction (e.g., "Trace and evaluate the argument and specific claims in a text, distinguishing claims that are supported by reasons and evidence from claims that are not").	No feedback on forum. Edits are being made to grades 6-12 W.9b based on feedback on RI.2, which is directly related to this standard.	Apply grade 6 Reading standards to literary nonfiction and/or informational texts (e.g., "Trace and evaluate the argument and specific claims in a text, distinguishing claims that are supported by reasons and evidence from claims that are not").
L.6.1	Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.	Demonstrate command of the conventions of standard English grammar and usage when writing (printing, cursive, or keyboarding) or speaking.		

				Grade 7	

Standard Identifier	Original Standard (May 2015)	Proposed Revision (December 2015)	APA Forum Feedback (December 2015 – January 2016)	MDE Response / Final Standard (January 2016)
RL.7.2	Determine a theme or central idea of a text and analyze its development over the course of the text; provide an objective summary of the text.	Determine a theme or central idea of a text and analyze in detail its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an accurate summary of the text based upon this analysis.		
RL.7.3	Analyze how particular elements of a story or drama interact (e.g., how setting shapes the characters or plot).	Analyze how particular elements of a literary text interact (e.g., how setting shapes the characters or plot).		
RL.7.4	Determine the meaning of words or phrases as they are used in a text, including figurative and connotative meanings; analyze the impact of rhymes and other repetitions of sounds (e.g. alliteration) on a specific verse or stanza of a poem or section of a story or drama.	Determine the meaning of words or phrases as they are used in a text, including figurative and connotative meanings; analyze the impact of specific word choice (e.g., alliteration) on meaning and tone.		
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.	Determine a theme or central idea of a text and analyze in detail its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an accurate summary of the text based upon this analysis.		
W.7.9a	Apply grade 7 Reading standards to literature (e.g., "Compare and contrast a fictional portrayal of time, place, or character and a historical account of the same period as a means of understanding how authors of fiction use or alter history").	Apply grade 7 Reading standards to literary texts (e.g., "Compare and contrast a fictional portrayal of time, place, or character and a historical account of the same period as a means of understanding how authors of fiction use or alter history").		

Grade 7

Standard Identifier	Original Standard (May 2015)	Proposed Revision (December 2015)	APA Forum Feedback (December 2015 – January 2016)	MDE Response / Final Standard (January 2016)
W.7.9b	Apply grade 7 Reading standards to literary nonfiction (e.g., "Trace and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient to support the claims").	Apply grade 7 Reading standards to informational texts, including literary nonfiction (e.g., "Trace and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient to support the claims.)	No feedback on forum. Edits are being made to grades 6-12 W.9b based on feedback on RI.2 which is directly related to this standard.	Apply grade 7 Reading standards to literary nonfiction and/or informational texts (e.g., "Trace and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient to support the claims").
L.7.1	Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.	Demonstrate command of the conventions of standard English grammar and usage when writing (printing, cursive, or keyboarding) or speaking.		

Grade 8

Standard Identifier	Original Standard (May 2015)	Proposed Revision (December 2015)	APA Forum Feedback (December 2015 – January 2016)	MDE Response / Final Standard (January 2016)
RL.8.2	Determine a theme or central idea of a text and analyze its development over the course of the text, including its relationship to the characters, setting, and plot; provide an objective summary of the text.	Determine a theme or central idea of a text and analyze in detail its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an accurate summary of the text based upon this analysis.	Revise standard to read: Determine a theme or central idea of a text and analyze in detail its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an accurate summary of key supporting details based upon this analysis. Comment: By changing "summary of the text" to "summary of supporting details," the standard would more clearly match the anchor standard, and the summary portion of the	No action. Committee recommended leaving as is because the term "summary" indicates that the language is free from personal judgement.

Standard Identifier	Original Standard (May 2015)	Proposed Revision (December 2015)	APA Forum Feedback (December 2015 – January 2016)	MDE Response / Final Standard (January 2016)
			standard would be more clearly linked to the previous portion of the standard. A true "summary of the text" should be objective and not in service to a particular analysis, potentially pulling information out of context to make the text fit their claim. Comment: The statement of "provide an accurate summary of the text" is covered in RL 8.1. In thinking of the skill of analysis a summary of the full text is necessary prior to analysis, not after. In addition, providing a "summary of the text based upon this analysis" may lead students to take pieces out of context and bias their reading/summary of the text. Comment: This should be a separate standard: provide an accurate summary of the text based upon this analysis.	

				Grade 8				

Standard Identifier	Original Standard (May 2015)	Proposed Revision (December 2015)	APA Forum Feedback (December 2015 – January 2016)	MDE Response / Final Standard (January 2016)
RL.8.3	Analyze how particular lines of dialogue or incidents in a story or drama propel the action, reveal aspects of a character, or provoke a decision.	Describe how a plot of a literary text unfolds in a series of episodes as well as how the characters respond or change as the plot moves toward a resolution.	Comment: Use of episodes is not consistent across grade levels. Revise standard to read: Describe how a plot of a literary text unfolds in a series of events as well as how the characters respond or change as the plot moves toward a resolution.	Analyze how particular lines of dialogue or incidents in a literary text propel the action, reveal aspects of a character, or provoke a decision.
RL.8.9	Analyze how a modern work of fiction draws on themes, patterns of events, or character types from myths, traditional stories, or religious works such as the Bible, including describing how the material is rendered new.	Analyze how myths, traditional stories, or religious works such as the Bible influence themes, patterns of events, or character types in a modern work, including how the material is rendered new.	Comment: I disagree that religious text are classified as fiction. In libraries, they are classified as NONFICTION....The word LITERATURE implies that the writing will be FICTIONAL. Revise standard to read: Analyze how myths, traditional stories, or other types of fictional literature can influence themes, patterns of events, or character types in a modern work, including how the material is rendered new.	No change. Committee recommended leaving as is because literary elements (metaphors, similes, symbolism) contained in the Bible classify it for use in the literature standards.
RI.8.2	Determine a central idea in a text and analyze its development over the course of the text, including its relationship to supporting ideas; provide an objective summary of the text.	Determine a theme or central idea of a text and analyze in detail its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an accurate summary of the text based upon this analysis.	Comment: Theme should not be included with informational texts.	Determine a central idea of a text and analyze in detail its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an accurate summary of the text based upon this analysis. (NOTE: The reference to theme will be deleted in RI.8.2, RI.9.2, and RI.10.2.)

			Grade 8		
Standard Identifier	**Original Standard (May 2015)**	**Proposed Revision (December 2015)**	**APA Forum Feedback (December 2015 – January 2016)**	**MDE Response / Final Standard (January 2016)**
RI.8.5	Analyze in detail the structure of a specific paragraph in a text, including the role of particular sentences in developing and refining a key concept.	Analyze the (in detail deleted) structure of a specific paragraph in a text, including the role of particular sentences in developing and refining a key concept.		
L.8.1	Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.	Demonstrate command of the conventions of standard English grammar and usage when writing (printing, cursive, or keyboarding) or speaking.		

		English I		
Standard Identifier	**Original Standard (May 2015)**	**Proposed Revision (December 2015)**	**APA Forum Feedback (December 2015 – January 2016)**	**MDE Response / Final Standard (January 2016)**
RL.9.2	Determine a theme or central idea of a text and analyze in detail its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text.	Determine 1-2 themes or central ideas of a text and analyze in detail their development over the course of the text, including how they interact and build on one another to produce a complex account; provide an accurate summary of the text based upon this analysis.	Comment: As currently written, this objective gives the option of determining one theme or two themes. However, if one chooses one theme then the rest of the objective doesn't make sense. What would that one theme/idea be interacting with? What does building "on one another" mean if there is only one theme/idea discussed? There needs to be two options in the second half to be consistent with the two options in the first half. Revise standard to read: Determine themes or central ideas of text and analyze in detail thematic development over the course of the text, including how details of text interact and build on one another to produce a complex account; provide an accurate summary of the text based upon this analysis. Comment: Summarizing the full text is necessary prior to analysis, not after. Summarizing the full text in light of the analysis may bias or decontextualize the reading of the text.	Determine the theme(s) or central idea(s) of a text and analyze in detail the development over the course of the text, including how details of a text interact and build on one another to shape and refine the theme(s) or central idea(s); provide an accurate summary of the text based upon this analysis. (**NOTE: This revision will be made to RL.9.2, RL.10.2, RL.11.2, and RL.12.2.**)

	English I			
Standard Identifier	**Original Standard (May 2015)**	**Proposed Revision (December 2015)**	**APA Forum Feedback (December 2015 – January 2016)**	**MDE Response / Final Standard (January 2016)**
RI.9.2	Determine a theme or central idea of a text and analyze in detail its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text.	Determine 1-2 themes or central ideas of a text and analyze in detail their development over the course of the text, including how they interact and build on one another to produce a complex account; provide an accurate summary of the text based upon this analysis.	Comment: If the option of determining only one theme is there, then the remainder of the standard would be impossible. Students cannot analyze how the themes interact and build on one another if they have only determined one theme. If the option for one theme is left, then the last portion should be altered.	Determine the central idea(s) of a text and analyze in detail the development over the course of the text, including how details of a text interact and build on one another to shape and refine the central idea(s); provide an accurate summary of the text based upon this analysis. **(NOTE: The reference to theme will be deleted in RI.8.2, RI.9.2, and RI.10.2.)**

	English II			
Standard Identifier	**Original Standard (May 2015)**	**Proposed Revision (December 2015)**	**APA Forum Feedback (December 2015 – January 2016)**	**MDE Response / Final Standard (January 2016)**
RL.10.2	Determine a theme or central idea of a text and analyze in detail its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text.	Determine 1-2 themes or central ideas of a text and analyze in detail their development over the course of the text, including how they interact and build on one another to produce a complex account; provide an accurate summary of the text based upon this analysis.	Comment: As currently written, this objective gives the option of determining one theme or two themes. However, if one chooses one theme then the rest of the objective doesn't make sense. What would that one theme/idea be interacting with? What does building "on one another" mean if there is only one theme/idea discussed? There needs to be two options in the second half to be consistent with the two options in the first half.	Determine the theme(s) or central idea(s) of a text and analyze in detail the development over the course of the text, including how details of a text interact and build on one another to shape and refine the theme(s) or central idea(s); provide an accurate summary of the text based upon this analysis. **(NOTE: This revision will be made to RL.9.2, RL.10.2, RL.11.2, and RL.12.2.)**

	English II			
Standard Identifier	Original Standard (May 2015)	Proposed Revision (December 2015)	APA Forum Feedback (December 2015 – January 2016)	MDE Response / Final Standard (January 2016)
RI.10.2	Determine a theme or central idea of a text and analyze in detail its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text.	Determine 1-2 themes or central ideas of a text and analyze in detail their development over the course of the text, including how they interact and build on one another to produce a complex account; provide an accurate summary of the text based upon this analysis.	Comment: If the option of determining only one theme is there, then the remainder of the standard would be impossible. Students cannot analyze how the themes interact and build on one another if they have only determined one theme. If the option for one theme is left, then the last portion should be altered.	Determine the central idea(s) of a text and analyze in detail the development over the course of the text, including how details of a text interact and build on one another to shape and refine the central idea(s); provide an accurate summary of the text based upon this analysis. (NOTE: The reference to theme will be deleted in RI.8.2, RI.9.2, and RI.10.2.)

	English III			
Standard Identifier	Original Standard (May 2015)	Proposed Revision (December 2015)	APA Forum Feedback (December 2015 – January 2016)	MDE Response / Final Standard (January 2016)
RL.11.2	Determine two or more themes or central ideas of a text and analyze their development over the course of the text, including how they interact and build on one another to produce a complex account; provide an objective summary of the text.	Determine two or more themes or central ideas of a text and analyze in detail their development over the course of the text, including how they interact and build on one another to produce a complex account; provide an accurate summary of the text based upon this analysis.	No feedback in forum. Revision made for consistency across grade levels.	Determine themes or central ideas of a text and analyze in detail their development over the course of the text, including how details of a text interact and build on one another to produce a complex account; provide an accurate summary of the text based upon this analysis. (NOTE: This revision will be made to RL.9.2, RL.10.2, RL.11.2, and RL.12.2.)

English III				
Standard Identifier	Original Standard (May 2015)	Proposed Revision (December 2015)	APA Forum Feedback (December 2015 – January 2016)	MDE Response / Final Standard (January 2016)
RL.11.3	Analyze the impact of the author's choices regarding how to develop and relate elements of a story or drama (e.g., where a story is set, how the action is ordered, how the characters are introduced and developed).	Analyze the impact of the author's choices regarding how to develop and relate elements of a literary text (e.g., where a story is set, how the action is ordered, how the characters are introduced and developed).		
RI.11.2	Determine two or more central ideas of a text and analyze their development over the course of the text, including how they interact and build on one another to provide a complex analysis; provide an objective summary of the text.	Determine two or more central ideas of a text and analyze in detail their development over the course of the text, including how they interact and build on one another to provide a complex analysis; provide an accurate summary of the text based upon this analysis.	No feedback in forum. Revision made for consistency across grade levels.	Determine central ideas of a text and analyze in detail their development over the course of the text, including how they interact and build on one another to produce a complex account; provide an accurate summary of the text based upon this analysis.

		English III		
Standard Identifier	Original Standard (May 2015)	Proposed Revision (December 2015)	APA Forum Feedback (December 2015 – January 2016)	MDE Response / Final Standard (January 2016)
RI.11.9	Analyze seventeenth-, eighteenth-, and nineteenth-century foundational U.S. documents of historical and literary significance (including the Declaration of Independence, the Preamble to the Constitution, the Bill of Rights, and Lincoln's Second Inaugural Address) for their themes, purposes, and rhetorical features.	Analyze seventeenth-, eighteenth-, and nineteenth-century foundational U.S. documents of historical and literary significance for their themes, purposes, and rhetorical features. Such documents might include the Declaration of Independence, the Preamble to the Constitution, the Bill of Rights, and Lincoln's Second Inaugural Address.		
L.11.3a	Vary syntax for effect, consulting references (e.g., Tufte's Artful Sentences) for guidance as needed; apply an understanding of syntax to the study of complex texts when reading.	Vary syntax for effect, consulting references (e.g., Tufte's Artful Sentences) for guidance as needed; when reading, demonstrate an understanding of syntax in the analysis of complex texts.	Comment: Readers need a context for analyzing the syntax. Analysis should be tied to the full text so that sentences are not taken out of context. Revise standard to read: Vary syntax for effect, consulting references (e.g., Tufte's Artful Sentences) for guidance as needed; when reading, demonstrate an understanding of syntax in the analysis of complex texts as it contributes to the purpose or meaning of the text.	Vary syntax for effect, consulting references (e.g., Tufte's Artful Sentences) for guidance as needed; when analyzing complex texts, demonstrate an understanding of how syntax contributes to the purpose or meaning of the text.

		English IV		
Standard Identifier	**Original Standard (May 2015)**	**Proposed Revision (December 2015)**	**APA Forum Feedback (December 2015 – January 2016)**	**MDE Response / Final Standard (January 2016)**
RL.12.2	Determine two or more themes or central ideas of a text and analyze their development over the course of the text, including how they interact and build on one another to produce a complex account; provide an objective summary of the text.	Determine two or more themes or central ideas of a text and analyze in detail their development over the course of the text, including how they interact and build on one another to produce a complex account; provide an accurate summary of the text based upon this analysis.	No feedback in forum. Revision made for consistency across grade levels.	Determine themes or central ideas of a text and analyze in detail their development over the course of the text, including how details of a text interact and build on one another to produce a complex account; provide an accurate summary of the text based upon this analysis. (**NOTE: This revision will be made to RL.9.2, RL.10.2, RL.11.2, and RL.12.2.**)
RL.12.3	Analyze the impact of the author's choices regarding how to develop and relate elements of a story or drama (e.g., where a story is set, how the action is ordered, how the characters are introduced and developed).	Analyze the impact of the author's choices regarding how to develop and relate elements of a literary text (e.g., where a story is set, how the action is ordered, how the characters are introduced and developed).		
RL.12.10	By the end of grade 12, read and comprehend literature, including stories, dramas, and poems, at the high end of the grade 11 CCR text complexity band independently and proficiently.	By the end of grade 12, read and comprehend literature, including stories, dramas, and poems, at the high end of the grade 12 CCR text complexity band independently and proficiently.		

		English IV		
Standard Identifier	**Original Standard (May 2015)**	**Proposed Revision (December 2015)**	**APA Forum Feedback (December 2015 – January 2016)**	**MDE Response / Final Standard (January 2016)**
RI.12.2	Determine two or more central ideas of a text and analyze their development over the course of the text, including how they interact and build on one another to provide a complex analysis; provide an objective summary of the text.	Determine two or more central ideas of a text and analyze in detail their development over the course of the text, including how they interact and build on one another to provide a complex analysis; provide an accurate summary of the text based upon this analysis.		
RI.12.9	Analyze seventeenth-, eighteenth-, and nineteenth-century foundational U.S. documents of historical and literary significance (including the Declaration of Independence, the Preamble to the Constitution, the Bill of Rights, and Lincoln's Second Inaugural Address) for their themes, purposes, and rhetorical features.	Analyze seventeenth-, eighteenth-, and nineteenth-century foundational U.S. documents of historical and literary significance for their themes, purposes, and rhetorical features. Such documents might include the Declaration of Independence, the Preamble to the Constitution, the Bill of Rights, and Lincoln's Second Inaugural Address.		
RI.12.10	By the end of grade 12, read and comprehend literary nonfiction at the high end of the grade 11 CCR text complexity band independently and proficiently,	By the end of grade 12, read and comprehend literary nonfiction at the high end of the grade 12 CCR text complexity band independently and proficiently,		
L.12.3a	Vary syntax for effect, consulting references (e.g., Tufte's Artful Sentences) for guidance as needed; apply an understanding of syntax to the study of complex texts when reading.	Vary syntax for effect, consulting references (e.g., Tufte's Artful Sentences) for guidance as needed; when reading, demonstrate an understanding of syntax in the analysis of complex texts.	No feedback in forum. Edits being made to L.12.3a based on comments on L.11.3a.	Vary syntax for effect, consulting references (e.g., Tufte's Artful Sentences) for guidance as needed; when analyzing complex texts, demonstrate an understanding of how syntax contributes to the purpose or meaning of the text.

Literacy in History/Social Studies (11th-12th Grades)				
Standard Identifier	Original Standard (May 2015)	Proposed Revision (December 2015)	APA Forum Feedback (December 2015 – January 2016)	MDE Response / Final Standard (January 2016)
RH.11-12.10	By the end of grade 12, read and comprehend history/social studies texts in the grade 11 CCR text complexity band independently and proficiently.	By the end of grade 12, read and comprehend history/social studies texts in the grade 12 CCR text complexity band independently and proficiently.		

Literacy in Science/Technical Subjects (11th-12th Grades)				
Standard Identifier	Original Standard (May 2015)	Proposed Revision (December 2015)	APA Forum Feedback (December 2015 – January 2016)	MDE Response / Final Standard (January 2016)
RST.11-12.10	By the end of grade 12, read and comprehend science/technical texts in the grade 11 CCR text complexity band independently and proficiently.	By the end of grade 12, read and comprehend science/technical texts in the grade 12 CCR text complexity band independently and proficiently.		