Grade 5 – Crosswalk (Summary of Revisions): 2016 *Mathematics Standards of Learning and Curriculum Framework*

Additions (2016 SOL)	Deletions from Grade 5 (2009 SOL)
• 5.5 EKS – Divide with decimal dividend and decimal divisor; model multiplication and division of decimals and whole numbers (parameters listed below) • 5.6b – Solve single-step practical problems involving multiplication of a whole number, limited to 12 or less, and a proper fraction, with models • 5.13a EKS – Compare and contrast properties of triangles; use geometric markings • 5.13b – Investigate the sum of the interior angles in a triangle and determine an unknown angle measure • 5.13 EKS – Use models to prove the sum of the interior angles of a triangle is 180° and use the relationship to determine unknown angle measure in a triangle • 5.14 – Recognize and apply transformations [Moved from 4.11] • 5.15 – Determine probability using Fundamental Counting Principle [Moved from 7.10] • 5.16abc – Represent and interpret data in a line plot [Moved from 3.17]; compare data represented in a line plot with the same data represented in a stem-and-leaf plot	• 5.5a – Addition and subtraction with decimals [Included in 4.6a] • 5.8d – Estimate and measure using U.S. Customary [Included in 4.8d] • 5.13a – Develop definitions for quadrilaterals [Included in 4.12] • 5.15 – Line graphs [Included in 4.14] • 5.16 EKS – Determine impact on measures of center when a single value of a data set is added, removed, or changed [Moved to 6.15] • 5.18c – Model one step linear equations [Included in 6.13]
Parameter Changes/Clarifications (2016 SOL)	**Moves within Grade 5 (2009 SOL to 2016 SOL)**
• 5.2 EKS – Represent fractions with denominators that are thirds, eighths, and factors of 100 in their equivalent decimal form with models; represent decimals in their equivalent fraction form (thirds, eighths, and factors of 100) with models; use the symbols >, <, =, and ≠ to compare decimals, fractions, and/or mixed numbers • 5.3 EKS – Use concrete or pictorial representations to demonstrate and explain why a number is prime or composite, why a number is even or odd, and why the sum or difference of two numbers is even or odd • 5.4 EKS – Apply strategies, including place value and application of the properties to +, -, ×, and ÷ [Application of properties moved from 5.19]; factors increased to two digit by three digit numbers [Moved from 4.4 EKS]; use context to interpret the quotient and the remainder • 5.5 – Create and solve practical problems with division of decimals limited to single-step • 5.5 EKS – Multiply decimals - factors do not exceed two digits by two digits; and products do not exceed the thousandths place; divide decimals - quotients do not exceed 4 digits, with or without a decimal point, and may include whole numbers, tenths, hundredths, or thousandths; divisors limited to single digit whole number or a decimal expressed as tenths; model × and ÷ of decimals and whole numbers • 5.8 EKS – Develop a procedure for determining the area of a right triangle; estimate and determine the volume of a rectangular prism with diagrams • 5.9a – Given the equivalent measure of one unit, identify equivalent metric measurements • 5.14 EKS – Compare and contrast the characteristics of a given polygon that has been subdivided, with the characteristics of the resulting parts • 5.17c EKS – Describe the range of a set of data as a measure of spread • 5.19c – Use an expression with a variable to represent a given verbal expression involving one operation	• 5.8c – [Moved to 5.9a] • 5.8d – Moved to 5.9b] • 5.8e – [Moved to 5.9 US] • 5.9 – [Moved to 5.10] • 5.10 – [Moved to 5.11] • 5.11 – [Moved to 5.12] • 5.12a – [Moved to 5.12] • 5.12b – [Moved to 5.13b] • 5.13 – [Moved to 5.14] • 5.14 – [Moved to 5.15] • 5.15 – [Moved to 5.16] • 5.16 – [Moved to 5.17] • 5.17 – [Moved to 5.18] • 5.18 – [Moved to 5.19] • 5.19 – [Application of the properties moved to 5.4]

EKS = Essential Knowledge and Skills, referring to the column on the right side of the Curriculum Framework
US = Understanding the Standard, referring to the column on the left side of the Curriculum Framework

Comparison of Standards of Learning – 2009 to 2016

2009 SOL	2016 SOL
Number and Number Sense *On the state assessment, items measuring this objective are assessed without the use of a calculator.*	
5.1 The student, given a decimal through thousandths, will round to the nearest whole number, tenth, or hundredth.	5.1 The student, given a decimal through thousandths, will round to the nearest whole number, tenth, or hundredth.
5.2 The student will a) recognize and name fractions in their equivalent decimal form and vice versa;* and b) compare and order fractions and decimals in a given set from least to greatest and greatest to least.*	5.2 The student will a) represent and identify equivalencies among fractions and decimals, with and without models;* and b) compare and order fractions, mixed numbers, and/or decimals, in a given set, from least to greatest and greatest to least.*
5.3 The student will a) identify and describe the characteristics of prime and composite numbers; and b) identify and describe the characteristics of even and odd numbers.	5.3 The student will a) identify and describe the characteristics of prime and composite numbers; and b) identify and describe the characteristics of even and odd numbers.
Computation and Estimation *On the state assessment, items measuring this objective are assessed without the use of a calculator.*	
5.4 The student will create and solve single-step and multistep practical problems involving addition, subtraction, multiplication, and division with and without remainders of whole numbers.*	5.4 The student will create and solve single-step and multistep practical problems involving addition, subtraction, multiplication, and division of whole numbers.
5.5 The student will a) find the sum, difference, product, and quotient of two numbers expressed as decimals through thousandths (divisors with only one nonzero digit);* [Addition and subtraction of decimals included in 4.6] and b) create and solve single-step and multistep practical problems involving decimals.*	5.5 The student will a) estimate and determine the product and quotient of two numbers involving decimals;* and b) create and solve single-step and multistep practical problems involving addition, subtraction, and multiplication of decimals, and create and solve single-step practical problems involving division of decimals.
5.6 The student will solve single-step and multistep practical problems involving addition and subtraction with fractions and mixed numbers and express answers in simplest form. * [Express in simplest form included in EKS]	5.6 The student will a) solve single-step and multistep practical problems involving addition and subtraction with fractions and mixed numbers; and b) solve single-step practical problems involving multiplication of a whole number, limited to 12 or less, and a proper fraction, with models.*
5.7 The student will evaluate whole number numerical expressions, using the order of operations limited to parentheses, addition, subtraction, multiplication, and division.*	5.7 The student will simplify whole number numerical expressions using the order of operations.*

2009 SOL	2016 SOL
Measurement and Geometry	

2009 SOL	2016 SOL
5.8 The student will a) find perimeter, area, and volume in standard units of measure; b) differentiate among perimeter, area, and volume and identify whether the application of the concept of perimeter, area, or volume is appropriate for a given situation; c) identify equivalent measurements within the metric system; [Moved to 5.9a] d) estimate and then measure to solve problems, using U.S. Customary and metric units; and [Metric moved to 5.9b; U.S. Customary included in 4.8d] e) choose an appropriate unit of measure for a given situation involving measurement using U.S. Customary and metric units. [Moved to 5.9 EKS]	5.8 The student will a) solve practical problems that involve perimeter, area and volume in standard units of measure; and b) differentiate among perimeter, area, and volume and identify whether the application of the concept of perimeter, area, or volume is appropriate for a given situation.
	5.9 The student will a) given the equivalent measure of one unit, identify equivalent measurements within the metric system; and [Moved from 5.8c] b) solve practical problems involving length, mass, and liquid volume using metric units. [Moved from 5.8d]
5.9 The student will identify and describe the diameter, radius, chord, and circumference of a circle.	5.10 The student will identify and describe the diameter, radius, chord, and circumference of a circle.
5.10 The student will determine an amount of elapsed time in hours and minutes within a 24-hour period.	5.11 The student will solve practical problems related to elapsed time in hours and minutes within a 24-hour period.
5.11 The student will measure right, acute, obtuse, and straight angles.	5.12 The student will classify and measure right, acute, obtuse, and straight angles. [Classify angles moved from 5.12a]
5.12 The student will classify a) angles as right, acute, obtuse, or straight; and [Moved to 5.12] b) triangles as right, acute, obtuse, equilateral, scalene, or isosceles. [Moved to 5.13a]	5.13 The student will a) classify triangles as right, acute, or obtuse and equilateral, scalene, or isosceles; and [Moved from 5.12b] b) investigate the sum of the interior angles in a triangle and determine an unknown angle measure.
5.13 The student, using plane figures (square, rectangle, triangle, parallelogram, rhombus, and trapezoid), will a) develop definitions of these plane figures; and [Included in 4.12] b) investigate and describe the results of combining and subdividing plane figures.	5.14 The student will a) recognize and apply transformations, such as translation, reflection, and rotation; [Moved from 4.11b] and b) investigate and describe the results of combining and subdividing polygons.

2009 SOL	2016 SOL
Probability and Statistics	
5.14 The student will make predictions and determine the probability of an outcome by constructing a sample space.	5.15 The student will determine the probability of an outcome by constructing a sample space or using the Fundamental (Basic) Counting Principle.
5.15 The student, given a problem situation, will collect, organize, and interpret data in a variety of forms, using stem-and-leaf plots and line graphs.	5.16 The student, given a practical problem, will a) represent data in line plots and stem-and-leaf plots; b) interpret data represented in line plots and stem-and-leaf plots; and c) compare data represented in a line plot with the same data represented in a stem-and-leaf plot.
5.16 The student will a) describe mean, median, and mode as measures of center; b) describe mean as fair share; c) find the mean, median, mode, and range of a set of data; and d) describe the range of a set of data as a measure of variation.	5.17 The student, given a practical context, will a) describe mean, median, and mode as measures of center; b) describe mean as fair share; c) describe the range of a set of data as a measure of spread; and [reordered] d) determine the mean, median, mode, and range of a set of data.
Patterns, Functions, and Algebra	
5.17 The student will describe the relationship found in a number pattern and express the relationship.	5.18 The student will identify, describe, create, express, and extend number patterns found in objects, pictures, numbers, and tables.
5.18 The student will a) investigate and describe the concept of variable; b) write an open sentence to represent a given mathematical relationship, using a variable; c) model one-step linear equations in one variable, using addition and subtraction; and [5.18c Included in 6.13] d) create a problem situation based on a given open sentence, using a single variable.	5.19 The student will a) investigate and describe the concept of variable; b) write an equation to represent a given mathematical relationship, using a variable; c) use an expression with a variable to represent a given verbal expression involving one operation; and d) create a problem situation based on a given equation, using a single variable and one operation.
5.19 The student will investigate and recognize the distributive property of multiplication over addition. [Application of properties moved to 5.4 EKS]	