2013–2014
Grade 4

This three part document serves as a guide for the transition from the Nevada State Standards (NSS) to the Common Core State Standards (CCSS). Users of this document should also refer to the Grade 4 Introduction and Narrative, and the Glossary of the CCSS.

Part I: The tables below list the Common Core State Standards introduced or maintained in Grade 4 in school year 2013–2014. Corresponding Nevada State Standards are listed where the content matches in whole or in part. Teachers are expected to maintain the NSS as well as teach the CCSS. In many cases, the expectations of the CCSS exceed the NSS. Teachers must move their instruction, and therefore their students' mathematical knowledge, from the level of the NSS to these CCSS. Teachers must also incorporate the *Standards for Mathematical Practice* into instruction to complete students' educational experiences. Additional clarification is provided in the comments for some CCSS. Cells shaded gray indicate CCSS introduced in school years 2011–2012 and 2012–2013 that must be maintained.

Operations and Algebraic Thinking

Use the four operations with whole numbers to solve problems.

Common Core State Standard (CCSS)	Nevada State Standard (NSS)	Change[1]	Comments
4.OA.1 Interpret a multiplication equation as a comparison, e.g., interpret 35 = 5 × 7 as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations.			
4.OA.2 Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison. *Note: See CCSS Glossary, Table 2.*	1.4.8 Generate and solve addition, subtraction, multiplication, and division problems using whole numbers in practical situations.	0	Extend solving problems in the NSS to distinguish multiplicative comparison from additive comparison.
	2.4.2 Model, explain, and solve open number sentences involving addition, subtraction, multiplication, and division. Select the solution to an equation from a given set of numbers.	0	The CCSS emphasizes generating a solution rather than selecting one from a set of numbers.
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.	1.4.6 Estimate to determine the reasonableness of an answer in mathematical and practical situations.	0	
	1.4.8 Generate and solve addition, subtraction, multiplication, and division problems using whole numbers in practical situations.	0	

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Operations and Algebraic Thinking

Gain familiarity with factors and multiples.

Common Core State Standard (CCSS)	Nevada State Standard (NSS)	Change[1]	Comments
4.OA.4 Find all factor pairs for a whole number in the range 1–100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1–100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1–100 is prime or composite.	1.6.8 Use the concepts of number theory, including prime and composite numbers, factors, multiples, and the rules of divisibility to solve problems.	–2	

Generate and analyze patterns.

Common Core State Standard (CCSS)	Nevada State Standard (NSS)	Change[1]	Comments
4.OA.5 Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself. *For example, given the rule "Add 3" and the starting number 1, generate terms in the resulting sequence and observe that the terms appear to alternate between odd and even numbers. Explain informally why the numbers will continue to alternate in this way.*	2.4.1 Identify, describe, and represent patterns and relationships in the number system, including arithmetic and geometric sequences.	0	Extend identifying the rule for a pattern in the NSS to observing other features of a pattern besides just the rule.

Number and Operations in Base Ten

Generalize place value understanding for multi-digit whole numbers.

Grade 4 expectations in this domain are limited to whole numbers less than or equal to 1,000,000.

Common Core State Standard (CCSS)	Nevada State Standard (NSS)	Change[1]	Comments
4.NBT.1 Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right. *For example, recognize that 700 ÷ 70 = 10 by applying concepts of place value and division.*	1.4.1 Identify and use place value positions of whole numbers to one million.	0	Extend place value in the NSS to <u>understanding</u> the relationship between adjacent places.
4.NBT.2 Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.	1.4.3 Read, write, compare, and order whole numbers. Read and write number words.	0	Extend reading and writing whole numbers in the NSS to include expanded form.
4.NBT.3 Use place value understanding to round multi-digit whole numbers to any place.			

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Number and Operations in Base Ten

Use place value understanding and properties of operations to perform multi-digit arithmetic.

Grade 4 expectations in this domain are limited to whole numbers less than or equal to 1,000,000.

Common Core State Standard (CCSS)	Nevada State Standard (NSS)	Change[1]	Comments
4.NBT.4 Fluently add and subtract multi-digit whole numbers using the standard algorithm.	1.4.7 Add and subtract multi-digit numbers. Multiply and divide multi-digit numbers by a one-digit whole number with regrouping, including monetary amounts as decimals.	0	While multiplying and dividing whole numbers in the NSS are still expected, it is not explicitly stated in this CCSS.
4.NBT.5 Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.	1.4.7 Add and subtract multi-digit numbers. Multiply and divide multi-digit numbers by a one-digit whole number with regrouping, including monetary amounts as decimals.	0	While adding, subtracting, and dividing whole numbers in the NSS are still expected, it is not explicitly stated in this CCSS. Extend computation with whole numbers in the NSS to include using strategies, and explaining and illustrating their use.
4.NBT.6 Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.	1.4.7 Add and subtract multi-digit numbers. Multiply and divide multi-digit numbers by a one-digit whole number with regrouping, including monetary amounts as decimals.	0	While adding, subtracting, and multiplying whole numbers in the NSS is still expected, it is not explicitly stated in this CCSS. Extend computation with whole numbers in the NSS to include using strategies, and explaining and illustrating their use.

Number and Operations—Fractions

Extend understanding of fractions equivalence and ordering.

Grade 4 expectations in this domain are limited to fractions with denominators 2, 3, 4, 5, 6, 8, 10, 12, and 100.

Common Core State Standard (CCSS)	Nevada State Standard (NSS)	Change[1]	Comments
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.	1.5.2 Add and subtract fractions with like denominators using models, drawings, and numbers. Compare fractions with unlike denominators using models and drawings, and by finding common denominators. Identify, model, and compare improper fractions and mixed numbers.	–1	Extend modeling of fractions in the NSS to explain equivalency using models and analyzing fractional parts. Also extend to generating equivalent fractions.

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Number and Operations—Fractions

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Common Core State Standard (CCSS)	Nevada State Standard (NSS)	Change[1]	Comments
4.NF.2 Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as 1/2. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols >, =, or <, and justify the conclusions, e.g., by using a visual fraction model.	1.5.2 Add and subtract fractions with like denominators using models, drawings, and numbers. Compare fractions with unlike denominators using models and drawings, and by finding common denominators. Identify, model, and compare improper fractions and mixed numbers.	–1	Extend modeling of fractions in the NSS to justifying conclusions about comparing fractions using visual models.

Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.

Grade 4 expectations in this domain are limited to fractions with denominators 2, 3, 4, 5, 6, 8, 10, 12, and 100.

Common Core State Standard (CCSS)	Nevada State Standard (NSS)	Change[1]	Comments
4.NF.3 Understand a fraction *a*/*b* with *a* > 1 as a sum of fractions 1/*b*. a. Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.			
4.NF.3 Understand a fraction *a*/*b* with *a* > 1 as a sum of fractions 1/*b*. b. 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.*			
4.NF.3 Understand a fraction *a*/*b* with *a* > 1 as a sum of fractions 1/*b*. c. Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction.	1.5.2 Add and subtract fractions with like denominators using models, drawings, and numbers. Compare fractions with unlike denominators using models and drawings, and by finding common denominators. Identify, model, and compare improper fractions and mixed numbers.	–1	

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Number and Operations—Fractions

Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.

Grade 4 expectations in this domain are limited to fractions with denominators 2, 3, 4, 5, 6, 8, 10, 12, and 100.

Common Core State Standard (CCSS)	Nevada State Standard (NSS)	Change[1]	Comments
4.NF.3 Understand a fraction *a*/*b* with *a* > 1 as a sum of fractions 1/*b*. d. Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, e.g., by using visual fraction models and equations to represent the problem.	1.5.2 Add and subtract fractions with like denominators using models, drawings, and numbers. Compare fractions with unlike denominators using models and drawings, and by finding common denominators. Identify, model, and compare improper fractions and mixed numbers.	–1	Extend adding and subtracting fractions, including with modeling, in the NSS to include solving word problems.
4.NF.4 Apply and extend previous understandings of multiplication to multiply a fraction by a whole number. a. Understand a fraction *a*/*b* as a multiple of 1/*b*. *For example, use a visual fraction model to represent 5/4 as the product 5 × (1/4), recording the conclusion by the equation 5/4 = 5 × (1/4).*	1.6.2 Add and subtract fractions with unlike denominators. Multiply and divide with fractions using models, drawings, and numbers. Use models to translate among fractions, decimals, and percents.	–2	
4.NF.4 Apply and extend previous understandings of multiplication to multiply a fraction by a whole number. b. Understand a multiple of a/b as a multiple of 1/b, and use this understanding to multiply a fraction by a whole number. *For example, use a visual fraction model to express 3 × (2/5) as 6 × (1/5), recognizing this product as 6/5. (In general, n × (a/b) = (n × a)/b.)*			
4.NF.4 Apply and extend previous understandings of multiplication to multiply a fraction by a whole number. c. 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?*			

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Number and Operations—Fractions

Understand decimal notation for fractions, and compare decimal fractions.

Grade 4 expectations in this domain are limited to fractions with denominators 2, 3, 4, 5, 6, 8, 10, 12, and 100.

Common Core State Standard (CCSS)	Nevada State Standard (NSS)	Change[1]	Comments
4.NF.5 Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100. *For example, express 3/10 as 30/100, and add 3/10 + 4/100 = 34/100.* *Note: Students who can generate equivalent fractions can develop strategies for adding fractions with unlike denominators in general. But addition and subtraction with unlike denominators in general is not a requirement at this grade.*			
4.NF.6 Use decimal notation for fractions with denominators 10 or 100. For example, rewrite 0.62 as 62/100; describe a length as 0.62 meters; locate 0.62 on a number line diagram.	1.6.5 Identify equivalent expressions between and among fractions, decimals, and percents.	–2	
4.NF.7 Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when the two decimals refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions, e.g., by using a visual model.	1.6.3 Read, write, compare, and order groups of fractions, groups of decimals, and groups of percents.	–2	Extend comparing decimals in the NSS to justifying conclusions using visual models.

Measurement and Data

Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.

Common Core State Standard (CCSS)	Nevada State Standard (NSS)	Change[1]	Comments
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), ...*			

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Measurement and Data

Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.

Common Core State Standard (CCSS)	Nevada State Standard (NSS)	Change[1]	Comments
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.	1.4.8 Generate and solve addition, subtraction, multiplication, and division problems using whole numbers in practical situations.	0	Extend solving problems using whole numbers in this NSS to include fractions and decimals.
4.MD.3 Apply the area and perimeter formulas for rectangles in real world and mathematical problems. *For example, find the width of a rectangular room given the area of the flooring and the length, by viewing the area formula as a multiplication equation with an unknown factor.*	3.6.3 Select, model, and apply formulas to find the perimeter, circumference, and area of plane figures.	–2	

Represent and interpret data.

Common Core State Standard (CCSS)	Nevada State Standard (NSS)	Change[1]	Comments
4.MD.4 Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Solve problems involving addition and subtraction of fractions by using information presented in line plots. *For example, from a line plot find and interpret the difference in length between the longest and shortest specimens in an insect collection.*	1.6.2 Add and subtract fractions with unlike denominators. Multiply and divide with fractions using models, drawings, and numbers. Use models to translate among fractions, decimals, and percents.	–2	This CCSS focuses on adding and subtracting fractions on a line plot.
	5.4.1 Pose questions that can be used to guide the collection of categorical and numerical data. Organize and represent data using a variety of graphical representations including frequency tables and line plots.	0	While collecting categorical data and making frequency tables in the NSS is still expected, it is not explicitly stated in this CCSS.
	5.4.3 Interpret data and make predictions using frequency tables and line plots.	0	Extend interpreting data in the NSS to include adding and subtracting fractions using information from a line plot.

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Measurement and Data

Geometric measurement: understand concepts of angle and measure angles.

Common Core State Standard (CCSS)	Nevada State Standard (NSS)	Change[1]	Comments
4.MD.5 Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement: a. An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through 1/360 of a circle is called a "one-degree angle," and can be used to measure angles.			
4.MD.5 Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement: b. An angle that turns through *n* one-degree angles is said to have an angle measure of *n* degrees.			
4.MD.6 Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.	4.6.1 Measure angles using a protractor. Identify, classify, compare and draw regular and irregular quadrilaterals. Identify, draw, and use central angles to represent fractions of a circle.	–2	
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.			

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Geometry

Draw and identify lines and angles, and classify shapes by properties of their lines and angles.

Common Core State Standard (CCSS)	Nevada State Standard (NSS)	Change[1]	Comments
4.G.1 Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.	4.4.1 Identify, draw, and classify angles, including straight, right, obtuse, and acute.	0	
	4.4.6 Identify, draw, label, and describe points, line segments, rays, and angles.	0	
	4.5.6 Identify, draw, label, and describe planes, parallel lines, intersecting lines, and perpendicular lines.	–1	
4.G.2 Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles.	4.5.7 Describe characteristics of right, acute, obtuse, scalene, equilateral, and isosceles triangles.	–1	Extend describing characteristics of figures in the NSS to include recognition of certain angles and parallel or perpendicular lines.

Geometry

Draw and identify lines and angles, and classify shapes by properties of their lines and angles.

Common Core State Standard (CCSS)	Nevada State Standard (NSS)	Change[1]	Comments
4.G.3 Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.	4.3.3 Create two-dimensional designs that contain a line of symmetry.	+1	Extend recognizing lines of symmetry in the NSS to drawing lines of symmetry in figures.

Parts II and III: All Nevada State Standards are now obsolete. All Common Core State Standards will be now assessed.

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