



**2012–2013  
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 2012–2013. 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 year 2011–2012 that must be maintained.

<b>Operations and Algebraic Thinking</b>			
<b>Use the four operations with whole numbers to solve problems.</b>			
<b>Common Core State Standard (CCSS)</b>	<b>Nevada State Standard (NSS)</b>	<b>Change<sup>1</sup></b>	<b>Comments</b>
4.OA.1 Interpret a multiplication equation as a comparison, e.g., interpret $35 = 5 \times 7$ as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations.			
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.  <i>Note: See CCSS Glossary, Table 2.</i>	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	

<sup>1</sup> Grade Level Change from current NSS to CCSS. (i.e., –1 indicates that the NSS was previously taught in the grade above.)



**Operations and Algebraic Thinking**  
**Gain familiarity with factors and multiples.**

Common Core State Standard (CCSS)	Nevada State Standard (NSS)	Change <sup>1</sup>	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 <sup>1</sup>	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. <i>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.</i>	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 <sup>1</sup>	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. <i>For example, recognize that <math>700 \div 70 = 10</math> by applying concepts of place value and division.</i>	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.			

<sup>1</sup> Grade Level Change from current NSS to CCSS. (i.e., -1 indicates that the NSS was previously taught in the grade above.)



<b>Number and Operations in Base Ten</b> <b>Use place value understanding and properties of operations to perform multi-digit arithmetic.</b> <i>Grade 4 expectations in this domain are limited to whole numbers less than or equal to 1,000,000.</i>			
Common Core State Standard (CCSS)	Nevada State Standard (NSS)	Change <sup>1</sup>	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.

<b>Number and Operations—Fractions</b> <b>Extend understanding of fractions equivalence and ordering.</b> <i>Grade 4 expectations in this domain are limited to fractions with denominators 2, 3, 4, 5, 6, 8, 10, 12, and 100.</i>			
Common Core State Standard (CCSS)	Nevada State Standard (NSS)	Change <sup>1</sup>	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.

<sup>1</sup> Grade Level Change from current NSS to CCSS. (i.e., -1 indicates that the NSS was previously taught in the grade above.)



**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 <sup>1</sup>	Comments
<p>4.NF.2</p> <p>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 <math>1/2</math>. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols <math>&gt;</math>, <math>=</math>, or <math>&lt;</math>, and justify the conclusions, e.g., by using a visual fraction model.</p>	<p>1.5.2</p> <p>Add and subtract fractions with like denominators using models, drawings, and numbers.</p> <p>Compare fractions with unlike denominators using models and drawings, and by finding common denominators.</p> <p>Identify, model, and compare improper fractions and mixed numbers.</p>	-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 <sup>1</sup>	Comments
<p>4.NF.3</p> <p>Understand a fraction <math>a/b</math> with <math>a &gt; 1</math> as a sum of fractions <math>1/b</math>.</p> <p>a. Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.</p>			
<p>4.NF.3</p> <p>Understand a fraction <math>a/b</math> with <math>a &gt; 1</math> as a sum of fractions <math>1/b</math>.</p> <p>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. <i>Examples:</i>  <math>3/8 = 1/8 + 1/8 + 1/8</math>; <math>3/8 = 1/8 + 2/8</math>;  <math>2-1/8 = 1 + 1 + 1/8 = 8/8 + 8/8 + 1/8</math>.</p>			
<p>4.NF.3</p> <p>Understand a fraction <math>a/b</math> with <math>a &gt; 1</math> as a sum of fractions <math>1/b</math>.</p> <p>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.</p>	<p>1.5.2</p> <p>Add and subtract fractions with like denominators using models, drawings, and numbers.</p> <p>Compare fractions with unlike denominators using models and drawings, and by finding common denominators.</p> <p>Identify, model, and compare improper fractions and mixed numbers.</p>	-1	

<sup>1</sup> Grade Level Change from current NSS to CCSS. (i.e., -1 indicates that the NSS was previously taught in the grade above.)



<b>Number and Operations—Fractions</b> <b>Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.</b> <i>Grade 4 expectations in this domain are limited to fractions with denominators 2, 3, 4, 5, 6, 8, 10, 12, and 100.</i>			
Common Core State Standard (CCSS)	Nevada State Standard (NSS)	Change <sup>1</sup>	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 $1/b$ . <i>For example, use a visual fraction model to represent <math>5/4</math> as the product <math>5 \times (1/4)</math>, recording the conclusion by the equation <math>5/4 = 5 \times (1/4)</math>.</i>	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. <i>For example, use a visual fraction model to express <math>3 \times (2/5)</math> as <math>6 \times (1/5)</math>, recognizing this product as <math>6/5</math>. (In general, <math>n \times (a/b) = (n \times a)/b</math>.)</i>			
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. <i>For example, if each person at a party will eat <math>3/8</math> 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?</i>			

<sup>1</sup> Grade Level Change from current NSS to CCSS. (i.e., -1 indicates that the NSS was previously taught in the grade above.)



**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 <sup>1</sup>	Comments
<p>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. <i>For example, express <math>3/10</math> as <math>30/100</math>, and add <math>3/10 + 4/100 = 34/100</math>.</i></p> <p><i>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.</i></p>			
<p>4.NF.6 Use decimal notation for fractions with denominators 10 or 100. For example, rewrite 0.62 as <math>62/100</math>; describe a length as 0.62 meters; locate 0.62 on a number line diagram.</p>	<p>1.6.5 Identify equivalent expressions between and among fractions, decimals, and percents.</p>	-2	
<p>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 <math>&gt;</math>, <math>=</math>, or <math>&lt;</math>, and justify the conclusions, e.g., by using a visual model.</p>	<p>1.6.3 Read, write, compare, and order groups of fractions, groups of decimals, and groups of percents.</p>	-2	Extend comparing decimals in the NSS to justifying conclusions using visual models.

<sup>1</sup> Grade Level Change from current NSS to CCSS. (i.e., -1 indicates that the NSS was previously taught in the grade above.)



<b>Measurement and Data</b>			
<b>Represent and interpret data.</b>			
<b>Common Core State Standard (CCSS)</b>	<b>Nevada State Standard (NSS)</b>	<b>Change<sup>1</sup></b>	<b>Comments</b>
4.MD.4 Make a line plot to display a data set of measurements in fractions of a unit ( $\frac{1}{2}$ , $\frac{1}{4}$ , $\frac{1}{8}$ ). Solve problems involving addition and subtraction of fractions by using information presented in line plots. <i>For example, from a line plot find and interpret the difference in length between the longest and shortest specimens in an insect collection.</i>	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.

<b>Geometry</b>			
<b>Draw and identify lines and angles, and classify shapes by properties of their lines and angles.</b>			
<b>Common Core State Standard (CCSS)</b>	<b>Nevada State Standard (NSS)</b>	<b>Change<sup>1</sup></b>	<b>Comments</b>
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.

<sup>1</sup> Grade Level Change from current NSS to CCSS. (i.e., -1 indicates that the NSS was previously taught in the grade above.)



<b>Geometry</b>			
<b>Draw and identify lines and angles, and classify shapes by properties of their lines and angles.</b>			
<b>Common Core State Standard (CCSS)</b>	<b>Nevada State Standard (NSS)</b>	<b>Change<sup>1</sup></b>	<b>Comments</b>
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.

Part II: The table below lists the Nevada State Standards (NSS) teachers are expected to continue to teach in Grade 4 in school year 2012–2013. In some cases, only part of the standard is to be maintained. These standards are still eligible to be assessed. Standards in **bold** indicate those found in Part I that link to the CCSS. Standards underlined indicate those that cannot be assessed on the state Criterion Reference Test (CRT). Additional clarification is provided in the comments.

<b>Nevada State Standard (NSS)</b>	<b>Comments</b>
<b>1.4.1</b> , 1.4.2, <b>1.4.3</b> , <u>1.4.4</u> , 1.4.5, <b>1.4.6</b> , <b>1.4.8</b> <b>2.4.1</b> , <b>2.4.2</b> , 2.4.3 3.4.1, 3.4.2, 3.4.3, 3.4.4 <b>4.4.1</b> , <b>4.4.6</b> <b>5.4.1</b> , <b>5.4.3</b>	Continue to teach the entire standard.
<b>1.4.7 (partial)</b> Add and subtract multi-digit numbers. Multiply and divide multi-digit numbers by a one-digit whole number with regrouping[.] ; <del>including monetary amounts as decimals.</del>	Continue to teach adding and subtracting of multi-digit numbers. Continue to multiply and divide multi-digit numbers by a one-digit whole number with regrouping.
3.4.6 (partial) Use elapsed time in quarter-hour increments, beginning on the quarter-hour, to determine start, end, and elapsed time. Recognize the number of weeks in a year, days in a year, and days in a month.	Teach only these parts of the standard.

<sup>1</sup> Grade Level Change from current NSS to CCSS. (i.e., –1 indicates that the NSS was previously taught in the grade above.)



Part III: The table below lists the Nevada State Standards (NSS) teachers are no longer expected to teach in Grade 4 in school year 2012–2013. In some cases, only part of a standard is to be deleted. Additional clarification is provided in the comments. Cells shaded gray indicate NSS eliminated in school year 2011–2012.

Nevada State Standard (NSS)	Comments
1.4.7 (partial) Multiply and divide multi-digit [monetary amounts as decimals] by a one-digit whole number with regrouping.	Continue to multiply and divide multi-digit numbers by a one-digit whole number with regrouping. Operations with decimals are in the CCSS in Grade 6.
3.4.6 (partial) Use A.M. and P.M. appropriately in describing time.	This part of the standard is in the CCSS in Grade 2.
4.4.2 Identify shapes that are congruent, similar, and/or symmetrical using a variety of methods including transformational motions.	
4.4.3 Identify coordinates for a given point in the first quadrant.  Locate points of given coordinates on a grid in the first quadrant.	This standard is in the CCSS in Grade 5.
4.4.4 Identify, describe, and classify two- and three-dimensional figures by relevant properties including the number of vertices, edges, and faces using models.	This standard is in the CCSS in Grade 5.
4.4.9 Use the connectors and, or, and not to describe the members of a set.	
5.4.2 Model and compute range.  Model the measures of central tendency for mode and median.	
5.4.5 Conduct simple probability experiments using concrete materials.  Represent the results of simple probability experiments as fractions to make predictions about future events.	This standard is in the CCSS in Grade 7.

<sup>1</sup> Grade Level Change from current NSS to CCSS. (i.e., –1 indicates that the NSS was previously taught in the grade above.)