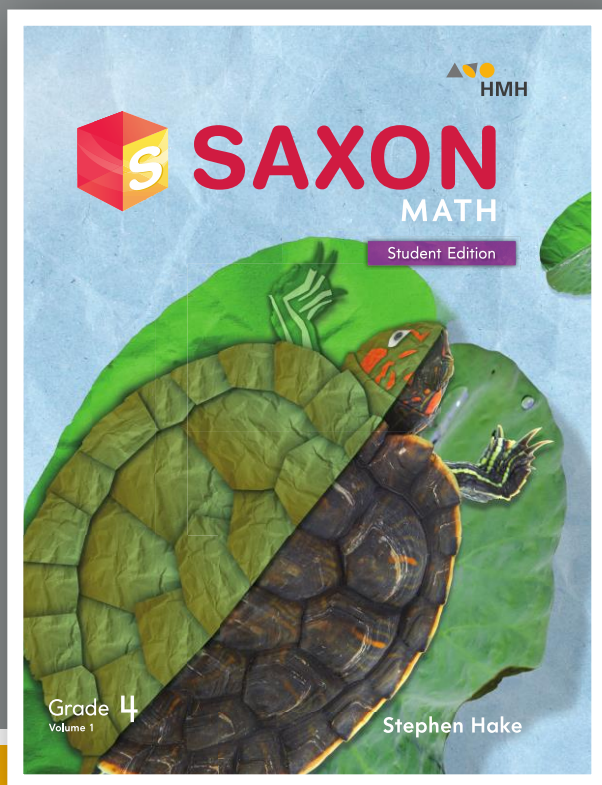


Correlation to the Oklahoma Academic Standards for Mathematics Grade 4



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Grade 4

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correlated to the

**Oklahoma Academic Standards for Mathematics (2016)
Grade 4**

Citations	Standard	Descriptor
4.N.1 Solve real-world and mathematical problems using multiplication and division.		
New Concept Lessons: 28, 29, 32, 38, 44, 45, 46, 47, 48, 49, 55, 57, 58, 59, 60, 62, 64, 65, 67, 69, 85, 86, 87, 90, 93, 94, 106, 108, 113 Investigation: 3, 11	4.N.1.1	Demonstrate fluency with multiplication and division facts with factors up to 12.
New Concept Lessons: 46, 47, 52, 53, 64, 65, 68, 71, 76, 80, 88, 93, 94, 105, 110 Oklahoma Success Lesson: 85 Oklahoma Success Lesson: 05	4.N.1.2	Use an understanding of place value to multiply or divide a number by 10, 100 and 1,000.
New Concept Lessons: 28, 42, 44, 45, 46, 48, 49, 58, 62, 67, 86, 87, 90, 108, 113 Investigation: 3	4.N.1.3	Multiply 3-digit by 1-digit or a 2-digit by 2-digit whole numbers, using efficient and generalizable procedures and strategies, based on knowledge of place value, including but not limited to standard algorithms.
New Concept Lessons: 20, 42, 54, 117	4.N.1.4	Estimate products of 3-digit by 1-digit or 2-digit by 2-digit whole numbers using rounding, benchmarks and place value to assess the reasonableness of results. Explore larger numbers using technology to investigate patterns.
New Concept Lessons: 19, 22, 27, 40, 43, 58, 69, 77, 83, 102 Investigation: 2, 11 Problem Solving Discussion Lessons: 42, 51, 56, 67, 73, 78, 87	4.N.1.5	Solve multi-step real-world and mathematical problems requiring the use of addition, subtraction, and multiplication of multi-digit whole numbers. Use various strategies, including the relationship between operations, the use of appropriate technology, and the context of the problem to assess the reasonableness of results.

Citations	Standard	Descriptor
New Concept Lessons: 46, 47, 52, 53, 64, 65, 68, 71, 76, 80, 88, 93, 94, 105, 110 Problem Solving Discussion Lesson: 114	4.N.1.6	Use strategies and algorithms based on knowledge of place value, equality and properties of operations to divide 3-digit dividend by 1-digit whole number divisors. (e.g., mental strategies, standard algorithms, partial quotients, repeated subtraction, the commutative, associative, and distributive properties).
New Concept Lessons: 37, 39, 103, 104, 109, 112, 115, 116, 119, 120 Oklahoma Success Lesson: 106 Oklahoma Success Lesson: 109 Investigation: 9	4.N.1.7	Determine the unknown addend or factor in equivalent and non-equivalent expressions. (e.g., $5 + 6 = 4 + \square$, $3 \times 8 < 3 \times \square$).
4.N.2 Represent and compare fractions and decimals in real-world and mathematical situations; use place value to understand how decimals represent quantities.		
New Concept Lesson: 37, 39, 50, 103, 104, 109, 112, 115, 116, 119, 120 Investigation: 4, 9	4.N.2.1	Represent and rename equivalent fractions using fraction models (e.g. parts of a set, area models, fraction strips, number lines).
New Concept Lessons: 56, 10 Oklahoma Success Investigation: 9 Investigation: 9	4.N.2.2	Use benchmark fractions (0, $\frac{1}{4}$, $\frac{1}{3}$, $\frac{1}{2}$, $\frac{2}{3}$, $\frac{3}{4}$, 1) to locate additional fractions on a number line. Use models to order and compare whole numbers and fractions less than and greater than one using comparative language and symbols.
New Concept Lessons: 89, 104, 107, 114, 119, 120 Investigation: 9	4.N.2.3	Decompose a fraction in more than one way into a sum of fractions with the same denominator using concrete and pictorial models and recording results with symbolic representations (e.g., $3 = 4 = \frac{1}{4} + \frac{1}{4} + \frac{1}{4}$).
New Concept Lessons: 89, 104, 107, 114, 119, 120 Investigation: 9	4.N.2.4	Use fraction models to add and subtract fractions with like denominators in real-world and mathematical situations.
New Concept Lessons: 35, 36, 69, 102 Investigation: 4, 9	4.N.2.5	Represent tenths and hundredths with concrete models, making connections between fractions and decimals.
New Concept Lessons: 22, 35, 43, 50, 69, 83, 91, 94 Oklahoma Success Lesson: 83 Investigation: 4A, 4B, 5, 9	4.N.2.6	Represent, read and write decimals up to at least the hundredths place in a variety of contexts including money.

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Citations	Standard	Descriptor
New Concept Lesson: 91 Oklahoma Success Lesson: 91 Oklahoma Success Lesson: 102 Investigation: 4, 5, 9	4.N.2.7	Compare and order decimals and whole numbers using place value, a number line and models such as grids and base 10 blocks.
New Concept Lessons: 56, 103, 116 Investigation: 9	4.N.2.8	Compare benchmark fractions ($\frac{1}{4}$, $\frac{1}{2}$, $\frac{1}{2}$, $\frac{2}{3}$, $\frac{3}{4}$) and decimals (0.25, 0.50, 0.75) in real-world and mathematical situations.
4.N.3 Determine the value of coins in order to solve monetary transactions.		
New Concept Lessons: 30, 43	4.N.3.1	Given a total cost (whole dollars up to \$20 or coins) and amount paid (whole dollars up to \$20 or coins), find the change required in a variety of ways. Limited to whole dollars up to \$20 or sets of coins.
4.A.1 Use multiple representations of patterns to solve real-world and mathematical problems.		
New Concept Lessons: 3, 28, 32, 38, 57, 94 Investigations: 1, 3, 6, 11 Problem Solving Discussion Lessons: 11, 12, 22, 24, 25, 30, 31, 33, 35, 41, 62, 92, 94, 105, 108, 112, 113, 115, 117, 120	4.A.1.1	Create an input/output chart or table to represent or extend a numerical pattern.
New Concept Lessons: 3, 28, 32, 38, 57, 94 Investigations: 1, 3, 6, 11 Problem Solving Discussion Lessons: 11, 12, 22, 24, 25, 30, 31, 33, 35, 41, 62, 92, 94, 105, 108, 112, 113, 115, 117, 120	4.A.1.2	Describe the single operation rule for a pattern from an input/output table or function machine involving any operation of a whole number.
New Concept Lessons: 3, 32, 38 Oklahoma Success Lesson: 3 Investigations: 1, 3, 8 Problem Solving Discussion Lessons: 8, 11, 12, 22, 24, 25, 30, 31, 33, 35, 41, 62, 92, 94, 105, 108, 112, 113, 115, 117, 120	4.A.1.3	Create growth patterns involving geometric shapes and define the single operation rule of the pattern.

Citations	Standard	Descriptor
4.A.2 Use multiplication and division with unknowns to create number sentences representing a given problem situation.		
New Concept Lessons: 49, 52, 57, 60, 64, 65, 67, 70, 71, 76, 83, 88, 90, 94, 95, 96, 108, 113, 118 Oklahoma Success Lesson: 103	4.A.2.1	Use number sense, properties of multiplication and the relationship between multiplication and division to solve problems and find values for the unknowns represented by letters and symbols that make number sentences true.
New Concept Lessons: 2, 11, 12, 24, 59, 60, 61, 64, 65, 80, 83, 88, 94 Oklahoma Success Lesson: 6 Oklahoma Success Lesson: 103	4.A.2.2	Solve for unknowns in problems by solving open sentences (equations) and other problems involving addition, subtraction, multiplication, or division with whole numbers. Use real-world situations to represent number sentences and vice versa.
4.GM.1 Name, describe, classify and construct polygons, and three-dimensional figures.		
New Concept Lesson: 23	4.GM.1.1	Identify points, lines, line segments, rays, angles, endpoints, and parallel and perpendicular lines in various contexts.
New Concept Lesson: 92 Oklahoma Success Lesson: 92	4.GM.1.2	Describe, classify, and sketch quadrilaterals, including squares, rectangles, trapezoids, rhombuses, parallelograms, and kites. Recognize quadrilaterals in various contexts.
New Concept Lessons: 98, 100 Oklahoma Success Lesson: 98	4.GM.1.3	Given two three-dimensional shapes, identify similarities, and differences.
4.GM.2 Understand angle, length, and area as measurable attributes of real-world and mathematical objects. Use various tools to measure angles, length, area, and volume.		
New Concept Lesson: 81	4.GM.2.1	Measure angles in geometric figures and real-world objects with a protractor or angle ruler.
New Concept Lessons: 21, 55, 62, 69, 108 Investigations: 2, 3	4.GM.2.2	Find the area of polygons that can be decomposed into rectangles.
New Concept Lesson: 111 Investigation: 3	4.GM.2.3	Using a variety of tools and strategies, develop the concept that the volume of rectangular prisms with whole-number edge lengths can be found by counting the total number of same-sized unit cubes that fill a shape without gaps or overlaps. Use appropriate measurements such as cm^3 .

Citations	Standard	Descriptor
New Concept Lessons: 19, 32, 40, 69, 77, 102 Investigation: 2	4.GM.2.4	Choose an appropriate instrument and measure the length of an object to the nearest whole centimeter or quarter-inch.
New Concept Lessons: 19, 22, 27, 40, 43, 58, 69, 77, 83, 102 Investigations: 2, 11 Problem Solving Discussion Lessons: 42, 51, 56, 67, 73, 78, 87	4.GM.2.5	Solve problems that deal with measurements of length, when to use liquid volumes, when to use mass, temperatures above zero and money using addition, subtraction, multiplication, or division as appropriate (customary and metric).
4.GM.3 Determine elapsed time and convert between units of time.		
New Concept Lessons: 19, 27	4.GM.3.1	Determine elapsed time.
Oklahoma Success Lesson: 54	4.GM.3.2	Solve problems involving the conversion of one measure of time to another.
4.D.1 Collect, organize, and analyze data.		
Oklahoma Success Investigation: 7 Part 1	4.D.1.1	Represent data on a frequency table or line plot marked with whole numbers and fractions using appropriate titles, labels, and units.
Investigations: 6, 7, 8 Oklahoma Success Investigation: 7 Part 2	4.D.1.2	Use tables, bar graphs, timelines, and Venn diagrams to display data sets. The data may include benchmark fractions or decimals ($\frac{1}{4}$, $\frac{1}{3}$, $\frac{1}{2}$, $\frac{2}{3}$, $\frac{3}{4}$, 0.25, 0.50, 0.75).
Investigations: 6, 7, 8	4.D.1.3	Solve one- and two-step problems using data in whole number, decimal, or fraction form in a frequency table and line plot.