

Grade 4 Math

Diary map is based on the 2017-2018 school year. Information may change year to year. Months are guidelines and items may be done at different times of the year.

Month	Essential Questions	Content	Skills	Assessment	Resources	Technology
<p align="center">Common Core Standards for Mathematical Content</p> <p>Operations and Algebraic Thinking 4.OA.A Use the four operations with whole numbers to solve problems. 4.OA.B Gain familiarity with factors and multiples. 4.OA.C Generate and analyze patterns.</p> <p>Number and Operations in Base Ten 4.NBT.A Generalize place value understanding for multi-digit whole numbers. 4.NBT.B Use place value understanding and properties of operations to perform multi-digit arithmetic.</p> <p>Number and Operations—Fractions 4.NF.A Extend understanding of fraction equivalence and ordering. 4.NF.B Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers. 4.NF.C Understand decimal notation for fractions and compare decimal fractions.</p> <p>Measurement and Data 4.MD.A Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit. 4.MD.B Represent and interpret data. 4.MD.C Geometric measurement: understand concepts of angle and measure angles.</p> <p>Geometry 4.G.A Draw and identify lines and angles and classify shapes by properties of their lines and angles.</p>			<p align="center">Common Core Standards for Mathematical Practice</p> MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning. *Practice standards are ongoing all year.			
Ongoing Standards: All	ALEKS How are math skills practiced and applied?	ALEKS -Grade level math topics and prerequisites	ALEKS -Apply math skills to solve problems that are individualized based on level of readiness	ALEKS -Mastery of individualized topics		ALEKS -ALEKS program -iPads
Aug.-Sept. Standards: 4.NBT.A.1 4.NBT.A.2	Place Value How does place value help represent the value of numbers?	Place Value -Place value -Multi-digit numbers -Comparing numbers -Ordering numbers	Place Value -Identify the place value of digits in multi-digit numbers	Place Value -McGraw-Hill <i>My Math</i> Grade 4 assessments (2016)	Place Value -McGraw-Hill <i>My Math</i> Grade 4 (2016)	Place Value -McGraw-Hill <i>My Math</i> Grade 4 online textbook (2016) -Elmo

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4.NBT.A.3 4.NBT.B.4 4.OA.A.3 4.OA.C.5	Add and Subtract Whole Numbers What strategies can be used to add or subtract?	-Rounding -Four-step plan Add and Subtract Whole Numbers -Addition properties and subtraction rules -Addition and subtraction patterns -Estimating sums and differences -Adding whole numbers -Subtracting whole numbers -Subtracting across zeros -Solving multi-step word problems	-Read and write multi-digit whole numbers -Compare numbers using a number line and a place value chart -Order numbers by using a place value chart and comparing the digit values -Estimate numbers by rounding -Use the four-step plan to solve problems Add and Subtract Whole Numbers -Use addition properties and subtraction rules to add and subtract -Use patterns to solve addition and subtraction problems -Estimate sums and differences of multi-digit numbers -Add multi-digit whole numbers -Subtract multi-digit whole numbers -Subtract multi-digit numbers, when some digits are zeros -Solve multi-step word problems using addition and subtraction	Add and Subtract Whole Numbers -McGraw-Hill <i>My Math</i> Grade 4 assessments (2016)	Add and Subtract Whole Numbers -McGraw-Hill <i>My Math</i> Grade 4 (2016)	Add and Subtract Whole Numbers -McGraw-Hill <i>My Math</i> Grade 4 online textbook (2016) -Elmo

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<p>Oct.</p> <p>Standards: 4.NBT.B.5 4.NBT.B.6 4.OA.A.1 4.OA.A.2 4.OA.B.4</p>	<p>Understanding Multiplication and Division How are multiplication and division related?</p>	<p>Understanding Multiplication and Division -Multiplication and division -Division and subtraction -Comparing groups when multiplying -Comparing to solve problems -Multiplication properties and division rules -Problem Solving: The Associative Property -Factors and multiples -Reasonable answers</p>	<p>Understanding Multiplication and Division -Relate multiplication and division -Relate division and subtraction -Recognize the comparison of two groups as another strategy to use when multiplying -Use comparison to solve problems -Use multiplication properties and division rules -Use the Associative Property of Multiplication to solve problems -Find factors and multiples of whole numbers -Check answers for reasonableness</p>	<p>Understanding Multiplication and Division -McGraw-Hill <i>My Math</i> Grade 4 assessments (2016)</p>	<p>Understanding Multiplication and Division -McGraw-Hill <i>My Math</i> Grade 4 (2016)</p>	<p>Understanding Multiplication and Division -McGraw-Hill <i>My Math</i> Grade 4 online textbook (2016) -Elmo</p>
<p>Nov.</p> <p>Standards: 4.NBT.A.1 4.NBT.A.3 4.NBT.B.5</p>	<p>Multiply with One-Digit Numbers What strategies can be used to multiply with one-digit numbers?</p>	<p>Multiply with One-Digit Numbers -Multiplying multiples of 10, 100, and 1,000 -Estimated products -Multiplication models -Area models and partial products -Multiplication of a two-digit number by a one-digit number</p>	<p>Multiply with One-Digit Numbers -Multiply multiples of 10, 100, and 1,000 using basic facts and patterns -Estimate products by rounding -Explore multiplication using models</p>	<p>Multiply with One-Digit Numbers -McGraw-Hill <i>My Math</i> Grade 4 assessments (2016)</p>	<p>Multiply with One-Digit Numbers -McGraw-Hill <i>My Math</i> Grade 4 (2016)</p>	<p>Multiply with One-Digit Numbers -McGraw-Hill <i>My Math</i> Grade 4 online textbook (2016) -Elmo</p>

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			-Explore multiplication using area models and partial products -Multiply a two-digit number by a one-digit number			
Dec.	Multiply with One-Digit Numbers What strategies can be used to multiply with one-digit numbers?	Multiply with One-Digit Numbers -Models for regrouping -The Distributive Property of Multiplication Multiplication: -two-digit by a one-digit number with regrouping -multi-digit number by a one-digit number -multi-digit number with zeros by a one-digit number -Estimate or Exact Products	Multiply with One-Digit Numbers -Explore multiplication with regrouping using models -Use the Distributive Property to make multiplication easier -Multiply a two-digit number by a one-digit number with regrouping -Multiply a multi-digit number by a one-digit number -Determine if a problem needs and estimate or an exact answer -Multiply multi-digit numbers with zeros by a one-digit number	Multiply with One-Digit Numbers -McGraw-Hill <i>My Math</i> Grade 4 assessments (2016)	Multiply with One-Digit Numbers -McGraw-Hill <i>My Math</i> Grade 4 (2016)	Multiply with One-Digit Numbers -McGraw-Hill <i>My Math</i> Grade 4 online textbook (2016) -Elmo
Jan.	Multiply with Two-Digit Numbers What strategies can be used to multiply with two-digit numbers?	Multiply with Two-Digit Numbers -Multiplication of a multi-digit number by a one-digit number -Estimate or Exact Products -Multiplication of a multi-digit number with zeros by a one-digit number	Multiply with Two-Digit Numbers -Multiply a multi-digit number by a one-digit number -Determine if a problem needs an estimate or an exact answer -Multiply a multi-digit number with zeros by a one-digit number	Multiply with Two-Digit Numbers -McGraw-Hill <i>My Math</i> Grade 4 assessments (2016)	Multiply with Two-Digit Numbers -McGraw-Hill <i>My Math</i> Grade 4 (2016)	Multiply with Two-Digit Numbers -McGraw-Hill <i>My Math</i> Grade 4 online textbook (2016) -Elmo

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Feb. Standards: 4.NBT.A.1 4.NBT.A.3 4.NBT.B.6 4.OA.A.3	Divide by a One-Digit Number How does division affect numbers?	Divide by a One-Digit Number -Multiples of 10, 100, and 1,000 -Estimates -Place Value -Models -Remainders -First digit of quotient -Distributive Property and Partial Quotients -Greater numbers -Quotients with zeros -Multi-step word problems	Divide by a One-Digit Number -Divide multiples of 10, 100, and 1,000 -Estimate quotients -Use place value to divide -Make a model -Divide with remainders -Interpret remainders -Place the first digit of a quotient -Use the Distributive Property and Partial Quotients -Divide greater numbers -Find quotients with zeros -Solve multi-step word problems	Divide by a One-Digit Number -McGraw-Hill <i>My Math</i> Grade 4 assessments (2016)	Divide by a One-Digit Number -McGraw-Hill <i>My Math</i> Grade 4 (2016)	Divide by a One-Digit Number -McGraw-Hill <i>My Math</i> Grade 4 online textbook (2016) -Elmo
March Standards: 4.OA.A.3 4.OA.C.5	Patterns and Sequences How are patterns used in mathematics?	Patterns and Sequences -Nonnumeric Patterns -Numeric Patterns -Sequences -Look for a pattern -Addition and Subtraction Rules -Multiplication and Division Rules -Order of Operations -Equations with Two Operations -Equations with Multiple Operations	Patterns and Sequences -Describe nonnumeric growing and repeating patterns -Identify, describe, and extend numeric patterns -Extend patterns and write observations about a pattern -Look for a pattern to solve problems -Find and use rules to write addition and subtraction equations	Patterns and Sequences -McGraw-Hill <i>My Math</i> Grade 4 assessments (2016)	Patterns and Sequences -McGraw-Hill <i>My Math</i> Grade 4 (2016)	Patterns and Sequences -McGraw-Hill <i>My Math</i> Grade 4 online textbook (2016) -Elmo

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			<ul style="list-style-type: none"> -Find and use rules to write multiplication and division equations -Use the Order of Operations to solve problems -Explore equations with two operations 			
<p>April</p> <p>Standards: 4.NF.B.3 4.NF.B.4</p>	<p>Fractions How can different fractions name the same amount?</p>	<p>Fractions -Factors and multiples -Prime and composite numbers -Equivalent fractions -Simplest form -Comparing and ordering fractions -Benchmark fractions -Logical reasoning -Mixed numbers -Mixed numbers and improper fractions</p>	<p>Fractions -Determine factors and multiples -Identify prime and composite numbers -Model and identify equivalent fractions -Reduce fractions to simplest form -Compare and order fractions -Use benchmark fractions to compare and order fractions -Use logical reasoning to solve problems -Write mixed numbers -Write mixed numbers and improper fractions</p>	<p>Fractions -McGraw-Hill <i>My Math</i> Grade 4 assessments (2016)</p>	<p>Fractions -McGraw-Hill <i>My Math</i> Grade 4 (2016)</p>	<p>Fractions -McGraw-Hill <i>My Math</i> Grade 4 online textbook (2016) -Elmo</p>
<p>May</p> <p>Standards: 4.NF.B.3 4.NF.B.4</p>	<p>Operations with Fractions How are operations used to model real-world fractions?</p>	<p>Operations with Fractions -Models for addition -Addition of like fractions -Models for subtraction -Working backward -Addition of mixed numbers</p>	<p>Operations with Fractions -Use models to add like fractions -Add like fractions -Use models to subtract like fractions -Solve problems by working backward -Add mixed numbers</p>	<p>Operations with Fractions -McGraw-Hill <i>My Math</i> Grade 4 assessments (2016)</p>	<p>Operations with Fractions -McGraw-Hill <i>My Math</i> Grade 4 (2016)</p>	<p>Operations with Fractions -McGraw-Hill <i>My Math</i> Grade 4 online textbook (2016) -Elmo</p>

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		-Subtraction of mixed numbers -Models for fractions and multiplication -Multiplying by whole numbers	-Subtract mixed numbers -Model fractions and multiplication -Multiply fractions by whole numbers			