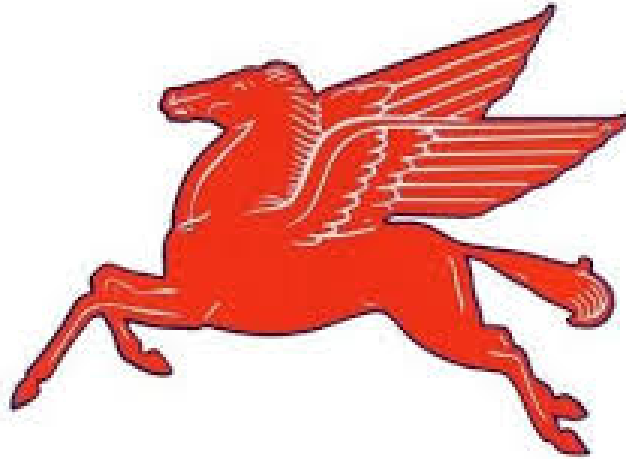


Curriculum Management System

PAULSBORO PUBLIC SCHOOLS



Mathematics - Grade 4

UPDATED 2020-2021

For adoption by all regular education programs as specified and for adoption or adaptation by all Special Education Programs in accordance with Board of Education Policy.

Board Approved: October 2021

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Mr. Matthew J. Browne, Principal, grades 3-6

Mr. Paul Morina, Principal, grades 7-12

Paulsboro Public Schools

Mission Statement

The mission of the Paulsboro School District is to work with students, parents, educators, and community to develop excellence in education while preparing each student to be viable and productive citizens in society. Our goal is to develop the unique potential of the whole student by creating a challenging and diverse learning climate that prepares students for the 21st Century and is rich in tradition and pride.

(#) GRADE PACING CHART (2020-2021)

TOPIC	# OF DAYS	DATES	COMMENTS
<i>1 – Generalize Place Value Understanding</i>	<i>10</i>		<i>Numbers Through One Million, Place Value Relationships, Compare Whole Numbers, Round Whole Numbers</i>
<i>2- Fluently Add and Subtract Multi-Digit Whole Numbers</i>	<i>10</i>		<i>Mental Math: Find and Estimate Sums and Differences, Add Whole Numbers, Subtract Whole Numbers, Subtract Across Zero's</i>
<i>3-Use Strategies and Properties to Multiply by 1-Digit Numbers</i>	<i>15</i>		<i>Multiply by Multiples of 10, 100, 1,000, Round to Estimate Products, The Distributive Property, Strategies for Multiplication, Arrays and Partial Products, Use Partial Products to Multiply 1-Digit Numbers, Multiply 2 and 3 Digit Numbers by 1-Digit Numbers, Multiply 4-Digit Numbers by 1-Digit, Multiply by 1-Digit Numbers</i>
<i>4- Use Strategies and Properties to Multiply by 2-Digit Numbers</i>	<i>15</i>		<i>Multiply Multiples of 10, Use Models to Multiply 2-Digit numbers by Multiples of 10, Use Rounding, Use Compatible Numbers, Arrays and Partial Products, Multiply Using the Distributive Property, Use Partial Products to Multiply by 2-Digit Numbers, Multiply 2-Digit By Multiples of 10, By 2-Digit Numbers, Continue to Multiply by 2-Digit Numbers</i>
<i>5-Use Strategies and Properties to Divide by 1-Digit Numbers</i>	<i>15</i>		<i>Find Quotients, Estimate Quotients, Estimate Quotients for Greater Dividends, Interpret Remainders, Division as Sharing, Use Partial Products, Use Partial Products to Divide, Divide</i>

			<i>with 1-Digit Numbers, Continue to Divide 1-Digit Numbers</i>
<i>6- Use Operations With Whole Numbers to Solve Problems</i>	<i>10</i>		<i>Solve Comparison Situations, Continue to Solve Comparison Situations, Solve Multi-Step Problems, Solve More Multi-Step Problems</i>
<i>7- Factors and Multiples</i>	<i>7</i>		<i>Understand Factors, Factors, Prime and Composite Numbers, Multiples</i>
<i>8- Extend Understanding of Fraction Equivalence and Ordering</i>	<i>12</i>		<i>Equivalent Fractions: Area Models, Number Lines, Multiplication, Division, Use Benchmarks to Compare Fractions, Compare Fractions</i>
<i>9- Understand Addition and Subtraction of Fractions</i>	<i>15</i>		<i>Model Addition of Fractions, Decompose Fractions, Add Fractions with Like Denominators, Model Subtraction of Fractions, Subtract Fractions With Like Denominators, Add and Subtract Fractions With Like Denominators, Estimate Fraction Sums and Differences, Model Addition and Subtraction of Mixed Numbers, Subtract Mixed Numbers</i>
<i>10- Extend Multiplication Concepts to Fractions</i>	<i>10</i>		<i>Fractions as Multiples of Unit Fractions, Multiply a Fraction by a Whole Number with Models and Symbols, Multiply a Whole Number and a Mixed Number, Solve the Problems</i>
<i>11- Represent and Interpret Data on Line Plots</i>	<i>4</i>		<i>Read Line Plots, Make Line Plots, Use Line Plots to Solve Problems</i>
<i>12- Understand and Compare Decimals</i>	<i>10</i>		<i>Fractions and Decimals, Fractions and Decimals on the Number Line, Compare Decimals, Add Fractions with Denominators of 10 and 100, Solve Word Problems Involving Money</i>

<i>13-Measurement: Find Equivalence in Units of Measure</i>	<i>12</i>		<i>Equivalence with Customary Units of Length, Equivalence with Customary Units of Capacity, Units of Weight, Metric Units of Length, Metric Units of Capacity and Mass, Solve Perimeter and Area Problems</i>
<i>14- Algebra: Generate and Analyze Patterns</i>	<i>7</i>		<i>Number Sequences, Patterns: Number Rules, Patterns: Repeating Shapes</i>
<i>15- Geometric Measurements: Understand Concepts of Angles and Angle Measurement</i>	<i>7</i>		<i>Lines, Rays, and Angles, Understand Angles and Unit Angles, Measure with Unit Angles, Measure and Draw Unit Angles, Add and Subtract Angle Measures</i>
<i>16- Lines Angles, and Shapes</i>	<i>7</i>		<i>Lines, Classify Triangles, Classify Quadrilaterals, Line Symmetry, Draw Shapes with Line Symmetry</i>

DEFINITIONS

NJ Student Learning Standards – Clear and specific benchmarks for students’ achievement in various content areas. The standards ensure that each child receives a “thorough and efficient education”.

21st Century Life and Careers Standards – These skills that are comprised of the “12 Career Ready Practices” and Standards 9.1 through 9.4. The organization of these standards intends to enable students to make informed decisions that prepare them to engage as active citizens in global society and be prepared for the opportunities of the 21st century workplace.

ELA Companion Standards - Consists of standards for reading and writing in History, Social Studies, Science and Technical subjects. ELA curricula

Gifted and Talented Learners - Students with high-ability who may need more depth and complexity in instruction.

Special Education Learners - Students in need of supports and interventions to improve student achievement

English Language Learners - Students with a native language other than English or who are at varying degrees of English language proficiency.

QUARTER 1 -

Big Idea: Generalize Place Value Understanding

Topic: Numbers Through One Million, Place Value Relationships, Compare Whole Numbers, Round Whole Numbers

<p>Standards: NJ Student Learning Standards: 4.NBT.A.1, 4.NBT.A.2, 4.NBT.A.3 21st Century Life and Careers: CAEP.9.2.4.A.4 Technology Standards: TECH.8.1.5.A.CS1, TECH.8.1.5.A.1 Anchor Standards: LA.RL.4.4, LA.RF.4.3 MODIFICATIONS: Gifted and Talented Learners:</p> <ul style="list-style-type: none"> • Math and Science Activity • Problem Solving Reading Mat <p>Special Education Learners:</p> <ul style="list-style-type: none"> • Provide additional manipulatives to support instruction • Allow for alternative strategies to solve algorithms or tasks • Provide the steps needed to complete the task • Model frequently • Use visuals to demonstrate/model the processes <p>English Language Learners:</p> <ul style="list-style-type: none"> • Use visual support to enhance understanding • Develop basic sight vocabulary • Use prior knowledge 	GOAL	
	<p>SWBAT Students will be able to read and write numbers in expanded form, with numerals, and using number names, recognize the relationship between adjacent digits in a multi-digit number, use place value to compare, and round.</p>	
	Essential Questions	Assessments
	<ul style="list-style-type: none"> • How are greater numbers written? • How can whole numbers be compared? • How are place values related? 	<ul style="list-style-type: none"> • Placement Test • Topic 1 Assessment • Lesson Quick Checks • Reteaching • Topic Performance Assessment
Enduring Understanding		Resources
<ul style="list-style-type: none"> • Our number system is based on groups of ten. • In a multi-digit whole number, a digit in the ones place represents ten times what it would represent in the place immediately to its right. • Place value can be used to compare numbers. • Rounding whole numbers is a process for finding the multiple of 10, 100, and so on closest to a given number. 		<ul style="list-style-type: none"> • Savvas Math book • Place value charts • Number lines • https://www.savvasrealize.com/community/home

QUARTER 1 -

Big Idea: Fluently Add and Subtract Multi-Digit Whole Numbers

Topic: Find Sums and Differences, Estimate Sums and Differences, Add Whole Numbers, Subtract Whole Numbers, Subtract Across Zeros

<p>Standards: NJ Student Learning Standards: 4.NBT.B.4, 4.OA.A.3 21st Century Life and Careers: CAEP.9.2.4.A.4 Technology Standards: TECH.8.1.5.A.CS1, TECH.8.1.5.A.1 Anchor Standards: LA.RL.4.4, LA.RF.4.3 MODIFICATIONS: Gifted and Talented Learners:</p> <ul style="list-style-type: none"> • Math and Science Activity • Problem Solving Reading Mat <p>Special Education Learners:</p> <ul style="list-style-type: none"> • Provide additional manipulatives to support instruction • Allow for alternative strategies to solve algorithms or tasks • Provide the steps needed to complete the task • Model frequently • Use visuals to demonstrate/model the processes <p>English Language Learners:</p> <ul style="list-style-type: none"> • Use visual support to enhance understanding • Develop basic sight vocabulary 	GOAL	
	<p>SWBAT : Students will add and subtract mentally, round greater whole numbers to estimate sums and differences, add to one million with and without regrouping, use place value and an algorithm to subtract whole numbers, and will use number sense and regrouping to subtract across zeros.</p>	
	Essential Questions	
	<ul style="list-style-type: none"> • How can sums and differences of whole numbers be estimated? • What are standard procedures for adding and subtracting whole numbers? 	<p style="text-align: center;">Assessments</p> <ul style="list-style-type: none"> • Fluency Practice Activity • Vocabulary Review • Reteaching • Topic Assessment • Topic Performance Assessment • Practice Buddy • Quick Check
	Enduring Understanding	
<ul style="list-style-type: none"> • Representing numbers and numerical expressions in equivalent forms can make some calculations easy to do mentally • There is more than one way to estimate a sum or difference • The standard addition and subtraction algorithm for multi-digit numbers breaks calculation into simpler calculations using place value 	<p style="text-align: center;">Resources</p> <ul style="list-style-type: none"> • Savvas math book • Place value blocks • Place value charts • https://www.savvasrealize.com/community/home 	

QUARTER 1-

Big Idea: Use Strategies and Properties to Multiply by 1-Digit Numbers

Topic: Multiply by Multiples of 10's, Round to Estimate Products, The Distributive Property, Mental Math Strategies, Arrays and Partial Products, Use Partial Products to multiply by 1-Digit Numbers, Multiply by 1, 2 3 and 4 Digit Numbers

<p>Standards: NJ Student Learning Standards: 4.NBT.B.5 21st Century Life and Careers: CAEP.9.2.4.A.4 Technology Standards: TECH.8.1.5.A.CS1, TECH.8.1.5.A.1 Anchor Standards: LA.RL.4.4, LA.RF.4.3 MODIFICATIONS: Gifted and Talented Learners:</p> <ul style="list-style-type: none"> • Math and Science Activity • Problem Solving Reading Mat <p>Special Education Learners:</p> <ul style="list-style-type: none"> • Provide additional manipulatives to support instruction • Allow for alternative strategies to solve algorithms or tasks • Provide the steps needed to complete the task • Model frequently • Use visuals to demonstrate/model the processes <p>English Language Learners:</p> <ul style="list-style-type: none"> • Use visual support to enhance understanding • Develop basic sight vocabulary 	GOAL	
	<p>SWBAT Students will multiply multiples of 10, 100, 1,000 using mental math and place-value strategies, round to estimate products, use the distributive property, use place value strategies, standard algorithm, arrays and partial products to multiply 3 and 4 digit numbers by a 1-digit number.</p>	
	Essential Questions	Assessments
	<ul style="list-style-type: none"> • How can you multiply by multiples of 10, 100, and 1,000? • How can you estimate when you multiply? 	<ul style="list-style-type: none"> • Fluency Practice Activity • Vocabulary Review • Reteaching • Topic Assessment • Topic Performance Assessment • Practice Buddy • Quick Check
Enduring Understanding		Resources
<ul style="list-style-type: none"> • Basic facts and place-value patterns can be used to find products when one factor is 10, 100, or 1,000 • Rounding is one way to estimate • The properties of multiplication can be used to simplify computation • Properties and place-value understanding can be used to multiply 	<ul style="list-style-type: none"> • Savvas math book • Place value blocks • https://www.savvasrealize.com/community/home • Grid paper • Money • Number lines 	

- Demonstrate listening comprehension by responding to questions

- The expanded algorithm can be represented with arrays and partial products
- The standard algorithm is a shortcut to the expanded algorithm. Regrouping is used.
- The standard algorithm for multiplication involves breaking apart numbers using place value, finding partial products, and then adding to get the final product.

QUARTER 1 -

Big Idea: Use Strategies and Properties to Multiply by 2-Digit Numbers

Topic: Use Partial Products to Multiply by 2-Digit Numbers, Multiply 2-Digit by Multiples of 10, Multiply 2-Digit by 2-Digit Numbers

<p>Standards: NJ Student Learning Standards: 4.NBT.B.5, 4.OA.A.3 21st Century Life and Careers: CAEP.9.2.4.A.4 Technology Standards: TECH.8.1.5.A.CS1, TECH.8.1.5.A.1 Anchor Standards: LA.RL.4.4, LA.RF.4.3 MODIFICATIONS: Gifted and Talented Learners:</p> <ul style="list-style-type: none"> • Math and Science Activity • Problem Solving Reading Mat <p>Special Education Learners:</p> <ul style="list-style-type: none"> • Provide additional manipulatives to support instruction • Allow for alternative strategies to solve algorithms or tasks • Provide the steps needed to complete the task • Model frequently • Use visuals to demonstrate/model the processes <p>English Language Learners:</p> <ul style="list-style-type: none"> • Use visual support to enhance understanding • Develop basic sight vocabulary • Demonstrate listening comprehension by responding to questions 	GOAL	
	<p>SWBAT Students will use place-value strategies, standard algorithm, models, and partial products to calculate products of 2-digit by 2-digit numbers.</p>	
	Essential Questions	Assessments
	<ul style="list-style-type: none"> • How can you use a model to multiply? • How can you use the Distributive Property to multiply? • How can you use Multiplication to solve problems? 	<ul style="list-style-type: none"> • Fluency Practice Activity • Vocabulary Review • Reteaching • Topic Assessment • Topic Performance Assessment • Practice Buddy • Quick Check • Cumulative/Benchmark Assessment
Enduring Understanding		Resources
<ul style="list-style-type: none"> • Basic facts and place-value patterns can be used to mentally multiply 2-digit numbers by a multiple of 10 • Place-value blocks, area models, and arrays provide ways to visualize and find products • Estimate 2-digit by 2-digit products by replacing each factor with the closest multiple of 10 or by replacing factors with numbers that are close and easy to multiply mentally 	<ul style="list-style-type: none"> • Savvas math book • https://www.savvasrealize.com/community/home • Grid paper • Money • Index cards 	

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| | <ul style="list-style-type: none">• The expanded algorithm for multiplying with 2-digit numbers is an extension of the expanded algorithm of multiplying with 1-digit numbers• The Distributive Property can be used to multiply two 2-digit numbers by breaking the computation down into 4 simpler products together• Expanded algorithm can be represented with arrays• Use standard algorithm to multiply, regrouping is used instead of showing all partial products | |
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QUARTER 2-

Big Idea: Use Strategies and Properties to Divide by 1-Digit Numbers

Topic: Find Quotients, Estimate Quotients, Estimate Quotients for Greater Dividends, Interpret Remainders, Division as Sharing, Use Partial Quotients, Greater Dividends, Divide with 1-digit Numbers

<p>Standards:</p> <p>NJ Student Learning Standards: 4.OA.A.3, 4.NBT.B.6</p> <p>21st Century Life and Careers: CAEP.9.2.4.A.4</p> <p>Technology Standards: TECH.8.1.5.A.CS1, TECH.8.1.5.A.1</p> <p>Anchor Standards: LA.RL.4.4, LA.RF.4.3</p> <p>MODIFICATIONS:</p> <p>Gifted and Talented Learners:</p> <ul style="list-style-type: none"> • Math and Science Activity • Problem Solving Reading Mat <p>Special Education Learners:</p> <ul style="list-style-type: none"> • Provide additional manipulatives to support instruction • Allow for alternative strategies to solve algorithms or tasks • Provide the steps needed to complete the task • Model frequently • Use visuals to demonstrate/model the processes <p>English Language Learners:</p> <ul style="list-style-type: none"> • Use visual support to enhance understanding • Develop comprehension by taking notes • Use support from peers to develop vocabulary 	GOAL	
	<p>SWBAT Students will use mental math, place value strategies, compatible numbers, place-value patterns, drawings, and partial quotients to divide 1-digit, 2-digit, 3-digit, and 4-digit numbers.</p>	
	Essential Questions	
	<ul style="list-style-type: none"> • How can mental math be used to divide? • How can quotients be estimated? • How can the steps for dividing be explained? 	<p style="text-align: center;">Assessments</p> <ul style="list-style-type: none"> • Fluency Practice Activity • Vocabulary Review • Reteaching • Topic Assessment • Topic Performance Assessment • Practice Buddy • Quick Check
	Enduring Understanding	
<ul style="list-style-type: none"> • Basic facts and place-value patterns can be used to divide multiples of 10 and 100 by 1-digit numbers • There is more than one way to estimate a quotient (place-value and compatible numbers) • When dividing the remainder must be less than the divisor • Division is sharing • Partial quotients involves breaking apart the dividend, dividing the parts, and adding the partial quotients • The standard division algorithm breaks the 	<p style="text-align: center;">Resources</p> <ul style="list-style-type: none"> • Savvas math book • https://www.savvasrealize.com/community/home • 2 color counters • Place-value blocks 	

	<p>calculation into simpler calculations using basic facts, place-value, the relationship between multiplication and division, and estimation</p>	
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QUARTER 2 -

Big Idea: Use Operations with Whole Numbers to Solve Problems

Topic: Solve Comparison Situations, Solve Multi-Step Problems

<p>Standards: NJ Student Learning Standards: 4.OA.A.3, 4.NBT.B.6, 4.OA.A.1, 4.OA.A.2, 4.NBT.B.5 21st Century Life and Careers: CAEP.9.2.4.A.4 Technology Standards: TECH.8.1.5.A.CS1, TECH.8.1.5.A.1 Anchor Standards: LA.RL.4.4, LA.RF.4.3 MODIFICATIONS: Gifted and Talented Learners:</p> <ul style="list-style-type: none"> • Math and Science Activity • Problem Solving Reading Mat <p>Special Education Learners:</p> <ul style="list-style-type: none"> • Provide additional manipulatives to support instruction • Allow for alternative strategies to solve algorithms or tasks • Provide the steps needed to complete the task • Model frequently • Use visuals to demonstrate/model the processes <p>English Language Learners:</p> <ul style="list-style-type: none"> • Use visual support to confirm understanding • Develop comprehension by retelling information • Derive meanings from print 	GOAL	
	<p>SWBAT Students will interpret comparisons as multiplication or addition equations, use multiplication and division to compare two quantities, and will solve two-step (multi-step) problems by finding and solving the hidden question.</p>	
	Essential Questions	Assessments
	<ul style="list-style-type: none"> • How is comparing with multiplication different from comparing with addition? • How can you use equations to solve multi-step problems? 	<ul style="list-style-type: none"> • Fluency Practice Activity • Vocabulary Review • Reteaching • Topic Assessment • Topic Performance Assessment • Practice Buddy • Quick Check
Enduring Understanding		Resources
<ul style="list-style-type: none"> • Both addition and multiplication can be used to make comparisons • Bar diagrams and equations can be used to solve problems involving multiplicative comparison • Sometimes there is a hidden question that must be answered first 		<ul style="list-style-type: none"> • Savvas math book • https://www.savvasrealize.com/community/home • 2 color counters

QUARTER 2

Big Idea: Factors and Multiples

Topic: Understand Factors, Factors, Prime and Composite Numbers, Multiples

<p>Standards: NJ Student Learning Standards: 4.NBT.B.4, 4.NBT.B.5 21* Century Life and Careers: CAEP.9.2.4.A.4 Technology Standards: TECH.8.1.5.A.CS1, TECH.8.1.5.A.1 Anchor Standards: LA.RL.4.4, LA.RF.4.3 MODIFICATIONS: Gifted and Talented Learners:</p> <ul style="list-style-type: none"> • Math and Science Activity • Problem Solving Reading Mat <p>Special Education Learners:</p> <ul style="list-style-type: none"> • Provide additional manipulatives to support instruction • Allow for alternative strategies to solve algorithms or tasks • Provide the steps needed to complete the task • Model frequently • Use visuals to demonstrate/model the processes <p>English Language Learners:</p> <ul style="list-style-type: none"> • Use and reuse academic language in meaningful ways • Use visual support to confirm understanding 	GOAL	
	<p>SWBAT: Students will use arrays to find factors, use multiplication to find all the factor pairs for a whole number, use factors to determine whether a whole number greater than 1 is prime or composite, and use multiplication to find multiples of a given number.</p>	
	Essential Questions	Assessments
	<ul style="list-style-type: none"> • How can you use arrays or multiplication to find the factors of a number? • How can you identify prime and composite numbers? • How can you find multiples of a number? 	<ul style="list-style-type: none"> • Fluency Practice Activity • Vocabulary Review • Reteaching • Topic Assessment • Topic Performance Assessment • Practice Buddy • Quick Check
	Enduring Understanding	Resources
<ul style="list-style-type: none"> • Factors of a number can be found by arranging counters into rows with the same number in each row • Factors of numbers can be found in pairs by thinking about multiplication • Prime numbers have exactly two factors and composite numbers have more than 2 • The product of any nonzero whole number and a given nonzero whole number is a multiple of both • Factors and multiples are closely related 	<ul style="list-style-type: none"> • Savvas math book • https://www.savvasrealize.com/community/home • 2 color counters • Grid paper 	

QUARTER 2 -

Big Idea: Extend Understanding of Fraction Equivalence and Ordering

Topic: Equivalent Fractions: Area Models, Number Lines, Generate Equivalent Fractions using Multiplication and Division, Use Benchmarks to Compare Fractions, Compare Fractions

<p>Standards: NJ Student Learning Standards: 4.NF.A.1, 4.NF.A.2 21* Century Life and Careers: CAEP.9.2.4.A.4 Technology Standards: TECH.8.1.5.A.CS1, TECH.8.1.5.A.1 Anchor Standards: LA.RL.4.4, LA.RF.4.3 MODIFICATIONS: Gifted and Talented Learners:</p> <ul style="list-style-type: none"> • Math and Science Activity • Problem Solving Reading Mat <p>Special Education Learners:</p> <ul style="list-style-type: none"> • Provide additional manipulatives to support instruction • Allow for alternative strategies to solve algorithms or tasks • Provide the steps needed to complete the task • Model frequently • Use visuals to demonstrate/model the processes <p>English Language Learners:</p> <ul style="list-style-type: none"> • Use and reuse academic language in meaningful ways • Use visual support to confirm understanding 	GOAL	
	<p>SWBAT Students will use area models to recognize and generate fractions, use a number line to locate and identify fractions, use multiplication and division to find equivalent fractions, use benchmarks, area models, and number lines to compare fractions, and will use models or rename fractions to compare them.</p>	
	Essential Questions	Assessments
	<ul style="list-style-type: none"> • What are some ways to name the same part of the whole? • How can you compare fractions with unlike denominators? 	<ul style="list-style-type: none"> • Fluency Practice Activity • Vocabulary Review • Reteaching • Topic Assessment • Topic Performance Assessment • Practice Buddy • Quick Check • Cumulative/Benchmark Assessment
	Enduring Understanding	Resources
<ul style="list-style-type: none"> • Two fractions that represent the same part of the same whole are equivalent • The same fractional amount can be represented by an infinite set of different but equivalent fractions • When the numerator and denominator of a fraction are multiplied by the same whole number greater than 1, it is the same as multiplying the fraction by 1 	<ul style="list-style-type: none"> • Savvas math book • https://www.savvasrealize.com/community/home • Number Lines • Fraction Strips • Grid paper 	

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| | <ul style="list-style-type: none">• When the numerator and denominator of a fraction are divided by a common factor, the result is an equivalent fraction• One way to compare two fractions that are parts of the same whole is by comparing each to a benchmark fraction• When two fractions have the same denominator, the fraction with the greater numerator is greater, when they have the same numerator but different denominator, the fraction with the lesser denominator is greater | |
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QUARTER 3 -

Big Idea: Understand Addition and Subtraction of Fractions

Topic: Model Addition and Subtraction of Fractions, Decompose Fractions, Add and Subtract Fractions with like denominators, Estimate Fraction Sums and Differences, Add and Subtract Mixed Numbers

<p>Standards: NJ Student Learning Standards: 4.NF.B.3a, 4.NF.B.3b, 4.NF.B.3c, 4.NF.B.3d 21* Century Life and Careers: CAEP.9.2.4.A.4 Technology Standards: TECH.8.1.5.A.CS1, TECH.8.1.5.A.1 Anchor Standards: LA.RL.4.4, LA.RF.4.3 MODIFICATIONS: Gifted and Talented Learners:</p> <ul style="list-style-type: none"> • Math and Science Activity • Problem Solving Reading Mat <p>Special Education Learners:</p> <ul style="list-style-type: none"> • Provide additional manipulatives to support instruction • Allow for alternative strategies to solve algorithms or tasks • Provide the steps needed to complete the task • Model frequently • Use visuals to demonstrate/model the processes <p>English Language Learners:</p> <ul style="list-style-type: none"> • Express ideas on a variety of topics • Derive meaning from print • Use prior knowledge 	GOAL	
	<p>SWBAT Students will understand that building fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.</p>	
	Essential Questions	Assessments
	<ul style="list-style-type: none"> • How do you add and subtract fractions and mixed numbers with like denominators? • How can fractions be added and subtracted on a number line? 	<ul style="list-style-type: none"> • Fluency Practice Activity • Vocabulary Review • Reteaching • Topic Assessment • Topic Performance Assessment • Practice Buddy • Quick Check
Enduring Understanding		Resources
<ul style="list-style-type: none"> • Models can be used to show addition and subtraction of fractions as joining and separating parts of the whole • There is general method for both adding and subtracting fractions with like denominators, thought about as joining and separating segments on a number line • A fraction can be decomposed into the sum of two or more unit or non-unit fractions in more than one 	<ul style="list-style-type: none"> • Savvas math book • https://www.savvasrealize.com/community/home • Number Lines • Fraction Strips • Circle fraction models • Measuring cups • Number cubes • Crayons/markers 	

way in which the sum of the fractions is equal to the original fraction

- Fraction sums and differences can be estimated by thinking about how each fraction relates to other fractions that are easy to add and subtract
- Two procedure each for adding and subtracting mixed numbers both involve changing the calculation to a simpler equivalent fraction

QUARTER 3-

Big Idea: Extend Multiplication Concepts of Fractions

**Topic: Fractions as Multiples of Unit Fractions, Multiply a Fraction by a Whole Number (Models and Symbols),
Multiply a Fraction by a Whole Number and a Mixed Number, Solve Time Problems**

<p>Standards: NJ Student Learning Standards: 4.NF.B.3a, 4.NF.B.4a, 4.NF.B.4b, 4.NF.B.4c, 4.MD.A.2 21st Century Life and Careers: CAEP.9.2.4.A.4 Technology Standards: TECH.8.1.5.A.CS1, TECH.8.1.5.A.1 Anchor Standards: LA.RL.4.4, LA.RF.4.3 MODIFICATIONS: Gifted and Talented Learners:</p> <ul style="list-style-type: none"> • Math and Science Activity • Problem Solving Reading Mat <p>Special Education Learners:</p> <ul style="list-style-type: none"> • Provide additional manipulatives to support instruction • Allow for alternative strategies to solve algorithms or tasks • Provide the steps needed to complete the task • Model frequently • Use visuals to demonstrate/model the processes <p>English Language Learners:</p> <ul style="list-style-type: none"> • Demonstrate comprehension by retelling information • Share information in cooperative learning interactions • Collaborate with peers 	GOAL	
	<p>SWBAT Students will understand that building fractions from unit fractions by applying and extending previous understandings of operations on whole numbers</p>	
	Essential Questions	Assessments
	<ul style="list-style-type: none"> • How can you describe a fraction using a unit fraction? • How can you multiply a whole number by a mixed number? 	<ul style="list-style-type: none"> • Fluency Practice Activity • Vocabulary Review • Reteaching • Topic Assessment • Topic Performance Assessment • Practice Buddy • Quick Check
Enduring Understanding		Resources
<ul style="list-style-type: none"> • Any fraction can be written as times the unit fraction • Models and equations can be used to represent problems and compute products of whole numbers and fractions • The standard algorithms for adding, subtracting, multiplying, and dividing can be used to solve time problems 		<ul style="list-style-type: none"> • Savvas math book • https://www.savvasrealize.com/community/home • Number Lines • Fraction Strips • Circle fraction models • Measuring cups • Number cubes • Crayons/markers

QUARTER 3-

Big Idea: Understand and Compare Decimals

Topic: Fractions and Decimals, Fractions and Decimals on a Number Line, Compare Decimals, Add Fractions with Denominators of 10 and 100, Solve Word Problems Involving Money

<p>Standards: NJ Student Learning Standards: 4.NF.C.5, 4.NF.C.6, 4.NF.C.7, 4.MD.A.2 21st Century Life and Careers: CAEP.9.2.4.A.4 Technology Standards: TECH.8.1.5.A.CS1, TECH.8.1.5.A.1 Anchor Standards: LA.RL.4.4, LA.RF.4.3 MODIFICATIONS: Gifted and Talented Learners:</p> <ul style="list-style-type: none"> • Math and Science Activity • Problem Solving Reading Mat <p>Special Education Learners:</p> <ul style="list-style-type: none"> • Provide additional manipulatives to support instruction • Allow for alternative strategies to solve algorithms or tasks • Provide the steps needed to complete the task • Model frequently • Use visuals to demonstrate/model the processes <p>English Language Learners:</p> <ul style="list-style-type: none"> • Speak using content area vocabulary • Use accessible language and learn new essential language • Collaborate with peers 	GOAL	
	SWBAT Students will understand decimal notation for fractions, and compare decimal fractions.	
	Essential Questions	Assessments
	<ul style="list-style-type: none"> • How can you write a fraction as a decimal? • How can you locate points on a number line? • How do you compare decimals? 	<ul style="list-style-type: none"> • Fluency Practice Activity • Vocabulary Review • Reteaching • Topic Assessment • Topic Performance Assessment • Practice Buddy • Quick Check • Cumulative/Benchmark Assessment
	Enduring Understanding	Resources
<ul style="list-style-type: none"> • A decimal is another way to represent a fraction • Points on a number line can be used to represent both fractions and decimals • Place value can be used to compare decimals • Fractions with denominators of 10 can be written as equivalent fractions with denominators of 100 • Fractions and Decimals can be used to represent amounts of money 	<ul style="list-style-type: none"> • Savvas math book • https://www.savvasrealize.com/community/home • Number Lines • 2 color counters • Index cards • Money • Hundredths Grids 	

QUARTER 4-

Big Idea: Measurement: Find Equivalence in Units of Measure

Topic: Equivalence with Customary Units of Length, Units of Capacity, Units of Weight, Metric Units of Length, Equivalence with Metric Units of Capacity and Mass, Solve Perimeter and Area Problems

<p>Standards: NJ Student Learning Standards: 4.NBT.B.4, 4.NBT.B.5, 4.NF.B.3D, 4.NF.B.4c, 4.MD.A.1, 4.MD.A.2 21st Century Life and Careers: CAEP.9.2.4.A.4 Technology Standards: TECH.8.1.5.A.CS1, TECH.8.1.5.A.1 Anchor Standards: LA.RL.4.4, LA.RF.4.3 MODIFICATIONS: Gifted and Talented Learners:</p> <ul style="list-style-type: none"> • Math and Science Activity • Problem Solving Reading Mat <p>Special Education Learners:</p> <ul style="list-style-type: none"> • Provide additional manipulatives to support instruction • Allow for alternative strategies to solve algorithms or tasks • Provide the steps needed to complete the task • Model frequently • Use visuals to demonstrate/model the processes <p>English Language Learners:</p> <ul style="list-style-type: none"> • Use visual support • Explain content information • Use support to develop vocabulary 	GOAL	
	<p>SWBAT Students will solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.</p>	
	Essential Questions	Assessments
	<ul style="list-style-type: none"> • How can you convert from one unit to another? • How can you be precise when solving math problems? 	<ul style="list-style-type: none"> • Fluency Practice Activity • Vocabulary Review • Reteaching • Topic Assessment • Topic Performance Assessment • Practice Buddy • Quick Check
Enduring Understanding		Resources
<ul style="list-style-type: none"> • To convert from a larger unit to a smaller unit of length or capacity, metric units, or mass multiply the number of larger units by the conversion factor, that is, the number of smaller units in each larger unit • Some problems can be solved by applying the formula for the perimeter of a rectangle or the formula for the area of a rectangle 	<ul style="list-style-type: none"> • Savvas math book • https://www.savvasrealize.com/community/home • Grid paper • Meterstick • Ruler • Cup and pint containers • Yardstick • Rice 	

QUARTER 4-

Big Idea: Generate and Analyze Patterns

Topic: Number Sequences, Patterns: Number Rules, Repeating Shapes

<p>Standards: NJ Student Learning Standards: 4.OA.C.5 21st Century Life and Careers: CAEP.9.2.4.A.4 Technology Standards: TECH.8.1.5.A.CS1, TECH.8.1.5.A.1 Anchor Standards: LA.RL.4.4, LA.RF.4.3 MODIFICATIONS: Gifted and Talented Learners:</p> <ul style="list-style-type: none"> • Math and Science Activity • Problem Solving Reading Mat <p>Special Education Learners:</p> <ul style="list-style-type: none"> • Provide additional manipulatives to support instruction • Allow for alternative strategies to solve algorithms or tasks • Provide the steps needed to complete the task • Model frequently • Use visuals to demonstrate/model the processes <p>English Language Learners:</p> <ul style="list-style-type: none"> • Demonstrate listening comprehension by following direction • Ask and answer information using key words and expressions 	GOAL	
	SWBAT Students will generate and analyze patterns.	
	Essential Questions	Assessments
	<ul style="list-style-type: none"> • How can you use a rule to continue a pattern? • How can you use a table to extend a pattern? • How can use a repeating pattern to predict a shape? 	<ul style="list-style-type: none"> • Fluency Practice Activity • Vocabulary Review • Reteaching • Topic Assessment • Topic Performance Assessment • Practice Buddy • Quick Check
	Enduring Understanding	Resources
<ul style="list-style-type: none"> • Rules can be used to create or extend number sequences that form a pattern • Rules can be used to extend or create patterns in tables • It is possible to predict a shape in a repeating pattern of shapes 	<ul style="list-style-type: none"> • Savvas math book • https://www.savvasrealize.com/community/home • Pattern blocks • Grid paper 	

QUARTER 4-

Big Idea: Lines, Angles, and Shapes

Topic: Lines, Classify Triangles, Classify Quadrilaterals, Line Symmetry, Draw Shapes with Line Symmetry

<p>Standards: NJ Student Learning Standards: 4.G.A.1, 4.G.A.2, 4.G.A.3 21* Century Life and Careers: CAEP.9.2.4.A.4 Technology Standards: TECH.8.1.5.A.CS1, TECH.8.1.5.A.1 Anchor Standards: LA.RL.4.4, LA.RF.4.3 MODIFICATIONS: Gifted and Talented Learners:</p> <ul style="list-style-type: none"> • Math and Science Activity • Problem Solving Reading Mat <p>Special Education Learners:</p> <ul style="list-style-type: none"> • Provide additional manipulatives to support instruction • Allow for alternative strategies to solve algorithms or tasks • Provide the steps needed to complete the task • Model frequently • Use visuals to demonstrate/model the processes <p>English Language Learners:</p> <ul style="list-style-type: none"> • Use strategic learning techniques • Read linguistically accommodated content area material • Share information in cooperative learning interactions 	GOAL	
	SWBAT Students will draw and identify lines and angles, and classify shapes by properties of their lines and angles.	
	Essential Questions	Assessments
	<ul style="list-style-type: none"> • How can you classify triangles and quadrilaterals? • What is a line of symmetry? 	<ul style="list-style-type: none"> • Fluency Practice Activity • Vocabulary Review • Reteaching • Topic Assessment • Topic Performance Assessment • Practice Buddy • Quick Check • End of Year Assessment
Enduring Understanding		Resources
<ul style="list-style-type: none"> • Lines can be classified as parallel, intersecting, or perpendicular • Triangles are classified by their sides and by their angles • Quadrilaterals are classified by their sides and by their angles • A shape that can fold along a line into matching parts is line symmetric 	<ul style="list-style-type: none"> • Savvas math book • https://www.savvasrealize.com/community/home • Grid paper • Ruler • Dot paper • Pattern blocks • Markers/crayons • Construction paper • Scissors 	

