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PITTSGROVE TOWNSHIP SCHOOL DISTRICT

Pittsgrove Township
School District
P.R.I.D.E. Patience Respect Integrity Diligence Empathy

Course Name: Fifth-Grade Math	**Grade Level(s): 5**
Department: Math	**Credits:**
BOE Adoption Date: October 17, 2019	**Revision Date(s): June 18, 2020**

Course Description

In Grade 5, instructional time should focus on three critical areas: (1.) developing fluency with addition and subtraction of fractions, and developing understanding of the multiplication of fractions and of division of fractions in limited cases (unit fractions divided by whole numbers and whole numbers divided by unit fractions); (2.) extending division to 2 – digit divisors, integrating decimal fractions into the place value system and developing understanding of operations with decimals to hundredths, and developing fluency with whole number and decimal operations; and (3.) developing understanding of volume.

1. Students apply their understanding of fractions and fraction models to represent the addition and subtraction of fractions with unlike denominators as equivalent calculations with like denominators. They develop fluency in calculating sums and differences of fractions, and make reasonable estimates of them. Students also use the meaning of fractions, of multiplication and division, and the relationship between multiplication and division to understand and explain why the procedures for multiplying and dividing fractions make sense. (Note: this is limited to the case of dividing unit fractions by whole numbers and whole numbers by unit fractions.)

2. Students develop understanding of why division procedures work based on the meaning of base-ten numerals and properties of operations. They finalize fluency with multi-digit addition, subtraction, multiplication, and division. They apply their understandings of models for decimals, decimal notation, and properties of operations to add and subtract decimals to hundredths. They develop fluency in

these computations, and make reasonable estimates of their results. Students use the relationship between decimals and fractions, as well as the relationship between finite decimals and whole numbers (i.e., a finite decimal multiplied by an appropriate power of 10 is a whole number), to understand and explain why the procedures for multiplying and dividing finite decimals make sense. They compute products and quotients of decimals to hundredths efficiently and accurately.

3. Students recognize volume as an attribute of three-dimensional space. They understand that volume can be measured by finding the total number of same-size units of volume required to fill the space without gaps or overlaps. They understand that a 1-unit by 1-unit by 1-unit cube is the standard unit for measuring volume. They select appropriate units, strategies, and tools for solving problems that involve estimating and measuring volume. They decompose three-dimensional shapes and find volumes of right rectangular prisms by viewing them as decomposed into layers of arrays of cubes. They measure necessary attributes of shapes in order to determine volumes to solve real world and mathematical problems.

The following practices rest on important “processes and proficiencies” with longstanding importance in mathematics education.

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Mission Statement

The Pittsgrove Township School District believes in growing all learners to thrive. *The district offers an intellectually rigorous, dynamic curriculum aligned to state and national standards coupled with research-based practices in classrooms. The Pittsgrove Township School District strives to highlight critical thinking, problem-solving, intercultural literacy, digital literacy, collaboration, innovation, and a growth mindset as part of the instructional core of learning. The district provides high quality resources to provide young people the knowledge they need to approach the future as leaders and learners.*

Curriculum & Instruction Goals

1. To ensure students are college and career ready upon graduation
2. To vertically and horizontally align curriculum PreK-12 to ensure successful transition of students at each grade level
3. To identify individual student strengths and weaknesses utilizing various assessment measures (formative, summative, alternative, etc.) so as to differentiate instruction while meeting the rigor of the applicable content standards
4. To improve student achievement as assessed through multiple measures including, but not limited to, state testing, local assessments, and ongoing progress monitoring

How to Read this Document

This curricular document contains both a *pacing guide* and *curriculum units*. The pacing guide serves to communicate an estimated timeframe as to *when* critical knowledge and skills will be taught throughout the year. The pacing, however, may differ slightly depending upon the unique needs of each learner. The *curriculum units* contain more detailed information as to the content, goals, objectives, instructional strategies, resources, and assessments.

NJ Administrative Code and Statutes Key
^=Amistad Law **O=Diversity & Inclusion Law** **<>=Holocaust** **+=LGBT and Disabilities Law** ***=AAPI (Asian American and Pacific Islanders)** **$=Financial Literacy** **Use this key to understand where the NJ mandates are being implemented in the K-12 curriculum units.**

Pacing Guide

Course Title: Math 5
Prerequisite(s): Math 4

Unit Title	Duration/ Month(s)	Related Standards	Learning Goals	Critical Knowledge and Skills
Unit 1: Place Value	September Approx. 4 weeks	**5.NBT.A.1** **5.NBT.A.3** **5.NBT.A.3a** **5.NBT.A.3b** **Mathematical Practices** **MP.1** **MP.2** **MP.3** **MP.4** **MP.5** **MP.6** **MP.7** **MP.8**	Students will be able to recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left. Students will be able to read, write, and compare decimals to thousandths. Students will be able to read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g., 347.392 = 3 × 100 + 4 × 10 + 7 × 1 + 3 × (1/10) + 9 × (1/100) + 2 × (1/1000). Students will be able to compare two decimals to thousandths based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.	1. Read and write whole numbers through the millions. 2. Compare and order whole numbers through millions. 3. Use models to relate decimals to fractions. 4. Represent fractions that name tenths, hundredths, and thousandths as decimals. 5. Understand place value in decimal numbers. 6. Read and write decimals in standard form, expanded form, and word form. 7. Compare decimals. 8. Order whole numbers and decimals. 9. Solve problems using the four-step plan.

Unit 2: Add and Subtract Decimals	October Approx. 3 weeks	**5.NBT.A.4** **5.NBT.B.7** **<u>Mathematical Practices</u>** **MP.1** **MP.2** **MP.3** **MP.4** **MP.5** **MP.6** **MP.7** **MP.8**	Students will be able to use place value understanding to round decimals to any place. Students will be able to add, subtract, multiply and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction, relate the strategy to a written method and explain the reasoning used.	1. Round decimals. 2. Estimate sums and differences by rounding. 3. Solve problems by using an estimate or an exact answer. 4. Explore adding decimals using base-ten blocks. 5. Explore adding decimals using models. 6. Add decimals. 7. Use the Associative, Commutative, and Identity Properties to add whole numbers and decimals mentally. 8. Explore subtracting decimals using base-ten blocks. 9. Explore subtracting decimals using models. 10. Subtract decimals.
Units 3: Multiply Whole Numbers and Decimal Numbers	Oct./Nov. Approx. 5 weeks	**5.NBT.A.2** **5.NBT.B.5** **5.NBT.B.7** **<u>Mathematical Practices</u>** **MP.1** **MP.2** **MP.3** **MP.4** **MP.5**	Students will be able to explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.	1. Find the prime factorization of numbers. 2. Explore patterns in prime factorization. 3. Use powers and exponents in expressions. 4. Use basic facts and patterns to

		MP.6 **MP.7** **MP.8**	Students will be able to fluently multiply multi-digit whole numbers using the standard algorithm. Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.	multiply multiples of 10, 100, and 1,000 mentally. 5. Make a table to solve problems. 6. Explore multiplication by using area models. 7. Use the distributive property to multiply mentally. 8. Estimate products by using rounding and compatible numbers. 9. Multiply up to a three-digit number by a one-digit number. 10. Multiply up to a three-digit number by a two-digit number. 11. Estimate products of whole numbers and decimals. 12. Explore multiplying decimals by whole numbers. 13. Multiply decimals by whole numbers. 14. Explore using decimal models to multiply decimals. 15. Multiply decimals by decimals. 16. Multiply decimals by powers of ten. 17. Solve problems by looking for a

				pattern. 18. Use the Associative, Commutative, and Identity Properties to multiply mentally.
Unit 4: Divide by a One-Digit Divisor	December Approx. 4 weeks	**5.NBT.B.6** **<u>Mathematical Practices</u>** **MP.1** **MP.2** **MP.3** **MP.4** **MP.5** **MP.6** **MP.7** **MP.8**	Students will be able to find whole-number quotients of whole numbers with up to four-digit dividends and two-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. Understand how division and multiplication are related. 2. Explore division using models. 3. Carry out division with and without remainders. 4. Use basic facts and patterns to divide multiples of 10, 100, and 1,000 mentally. 5. Estimate quotients by using rounding and compatible numbers. 6. Explore division with greater numbers using models. 7. Divide using the Distributive Property and Partial Quotients. 8. Divide up to a four-digit number by a one-digit number. 9. Understand how to place the first digit in a quotient. 10. Solve division problems that result in quotients that have zeros. 11. Explore how to interpret the remainder in a division problem.

				12. Interpret the remainder in a division problem. 13. Identify extra information or missing information needed to solve a problem.
Unit 5: Divide by a Two-Digit Divisor	January Approximately 4 weeks	**5.NBT.B.6** **5.NBT.B.7** **<u>Mathematical Practices</u>** **MP.1** **MP.2** **MP.3** **MP.4** **MP.5** **MP.6** **MP.7** **MP.8**	Students will be able to find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Students will be able to add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.	1. Estimate quotients with two-digit divisors. 2. Explore dividing by two-digit divisors using models. 3. Divide up to a three-digit number by a two-digit divisor. 4. Adjust the quotient when the estimated digit is too high or too low. 5. Divide greater numbers by multi-digit divisors. 6. Solve problems by solving a simpler problem. 7. Estimate quotients of decimals and whole numbers 8. Explore dividing decimals by whole numbers. 9. Divide decimals by whole numbers. 10. Explore using models to divide decimals by decimals. 11. Divide decimals by decimals.

				12. Divide decimals by powers of ten.
Unit 6: Expressions and Patterns	February Approximately 2 weeks	**5.OA.A.1** **5.OA.A.2** **5.OB.B.3** **5.G.A.1** **5.G.A.2** **<u>Mathematical Practices</u>** **MP.1** **MP.2** **MP.3** **MP.4** **MP.5** **MP.6** **MP.7** **MP.8**	Students will be able to use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols. Students will be able to write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. - For example, express the calculation "add 8 and 7, then multiply by 2" as 2 × (8 + 7). Recognize that 3 × (18932 + 921) is three times as large as 18932 + 921, without having to calculate the indicated sum or product. Students will be able to generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane. - *For example, given the rule "Add 3" and the starting number 0, and given the rule "Add 6" and the starting number 0, generate terms in the resulting sequences, and observe that the terms in one sequence are twice the corresponding terms in the other sequence. Explain informally why this is so.* Students will be able to use a pair of perpendicular number lines, called	1. Write and evaluate numerical expressions. 2. Use the order of operations to evaluate expressions. 3. Use numbers and operation symbols to write verbal phrases as numerical expressions. 4. Solve problems by working backward. 5. Generate numerical patterns and identify pattern relationships. 6. Identify and extend patterns and sequences. 7. Plot points on a grid to solve real-world problems. 8. Graph points on a coordinate plane to solve real-world and mathematical problems. 9. Graph ordered pairs on a coordinate plane to solve problems involving two numerical patterns.

			axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates. Understand that the first number indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis, with the convention that the names of the two axes and the coordinates correspond (*e.g., x-axis and x-coordinate, y-axis and y-coordinate*). Students will be able to represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.	
Unit 7: Fractions and Decimals	Approx. 3 weeks February/March	**5.NF.A.2** **5.NF.B.3** **5.NF.B.5b** **5.NBT.B.5** **<u>Mathematical Practices</u>** **MP.1** **MP.2** **MP.3** **MP.4** **MP.5** **MP.6** **MP.7** **MP.8**	Students will be able to solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers. Students will be able to Interpret a fraction as division of the numerator	1. Solve world problems by interpreting a fraction as division of the numerator by the denominator. 2. Determine the common factors and the greatest common factor of a set of numbers. 3. Generate equivalent fractions by writing a fraction in simplest form. 4 .Guess, check and revise to solve problems.

			by the denominator (a/b = a ÷ b). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers, e.g., by using visual fraction models or equations to represent the problem. Students will be able to explain why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relating the principle of fraction equivalence a/b = (n×a)/(n×b) to the effect of multiplying a/b by 1 Students will be able to fluently multiply multi-digit whole numbers using the standard algorithm.	5. Determine the common multiple and the least common multiple of a set of numbers. 6. Compare fractions by using the least common denominator. 7. Explore how to use models and fraction equivalence to write fractions as decimals. 8. Use fraction equivalence to write fractions as decimals.
Unit 8: Add and Subtract Fractions	Approx. 3 weeks March	**5.NF.A.1** **5.NF.A.2** **<u>Mathematical Practices</u>** **MP.1** **MP.2** **MP.3** **MP.4** **MP.5** **MP.6** **MP.7** **MP.8**	Students will be able to add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators. Students will be able to solve word problems involving addition and subtraction of fractions referring to	1. Use number lines and benchmark fractions, such as ½, to round fractions. 2. Add like fractions and solve word problems involving the addition of like fractions. 3. Subtract like fractions and solve word problems involving the subtraction of like fractions. 4. Use models to add unlike fractions.

			the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers.	5. Add unlike fractions and solve word problems involving the addition of unlike fractions. 6. Use models to subtract unlike fractions. 7. Subtract unlike fractions and solve word problems involving the subtraction of unlike fractions. 8. Solve problems by determining reasonable answers. 9. Use number sense and benchmark fractions to estimate sums and differences. 10. Explore adding mixed numbers using models. 11. Add mixed numbers and solve word problems involving the addition of mixed numbers. 12. Subtract mixed numbers and solve word problems involving the subtraction of mixed numbers. 13. Use fraction equivalence to subtract with renaming.
Unit 9: Multiply and Divide Fractions	Approx. 3 weeks March/April	**5.NF.B.4a** **5.NF.B.4b** **5.NF.B.5a** **5.NF.B.6** **5.NF.B.7a**	Students will be able to interpret the product (a/b) × q as a parts of a partition of q into b equal parts; equivalently, as the result of a sequence of operations a × q ÷ b.	1. Explore how to find part of a number. 2. Estimate products of fractions using compatible numbers and

		5.NF.B.7b **5.NF.B.7c** **<u>Mathematical Practices</u>** **MP.1** **MP.2** **MP.3** **MP.4** **MP.5** **MP.6** **MP.7** **MP.8**	*- For example, use a visual fraction model to show (2/3) × 4 = 8/3, and create a story context for this equation. Do the same with (2/3) × (4/5) = 8/15. (In general, (a/b) × (c/d) = ac/bd.)* Students will be able to find the area of a rectangle with fractional side lengths by tiling it with unit squares of the appropriate unit fraction side lengths, and show that the area is the same as would be found by multiplying the side lengths. Multiply fractional side lengths to find areas of rectangles, and represent fraction products as rectangular areas. Students will be able to solve real world problems involving multiplication of fractions and mixed numbers, *e.g., by using visual fraction models or equations to represent the problem*. Students will be able to compare the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication. Students will be able to interpret division of a unit fraction by a non-zero whole number, and compute such quotients. *- For example, create a story context*	rounding. 3. Explore multiplying whole numbers and fractions using models. 4. Multiply whole numbers and fractions. 5. Explore using models to multiply a fraction by a fraction. 6. Multiply fractions. 7. Multiply mixed numbers. 8. Interpret multiplication of fractions as scaling. 9. Divide whole numbers by unit fractions using models. 10. Use bar diagrams to divide whole numbers by unit fractions. 11. Use bar diagrams to divide unit fractions by whole numbers. 12. Solve problems by drawing a diagram.

			for (1/3) ÷ 4, and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that (1/3) ÷ 4 = 1/12 because (1/12) × 4 = 1/3. Students will be able to interpret division of a whole number by a unit fraction, and compute such quotients. *- For example, create a story context for 4 ÷ (1/5), and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that 4 ÷ (1/5) = 20 because 20 × (1/5) = 4.* Students will be able to solve real world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions, e.g., by using visual fraction models and equations to represent the problem. *- For example, how much chocolate will each person get if 3 people share 1/2 lb of chocolate equally? How many 1/3-cup servings are in 2 cups of raisins?*	
Unit 10: Measurement	Approx. 3 weeks April/May	**5.MD.A.1** **5.MD.B.2**	Students will be able to convert among different-sized standard measurement units within a given measurement system	1. Measure length to the nearest half-inch and quarter inch. 2. Convert measurements of length

		<u>Mathematical Practices</u> **MP.1** **MP.2** **MP.3** **MP.4** **MP.5** **MP.6** **MP.7** **MP.8**	-*For example, convert 5 cm to 0.05 m, and use these conversions in solving multi-step, real world problems.* Students will be able to make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Use operations on fractions for this grade to solve problems involving information presented in line plots. - *For example, given different measurements of liquid in identical beakers, find the amount of liquid each beaker would contain if the total amount in all the beakers were redistributed equally.*	within the customary system. 3. Solve problems by using logical reasoning. 4. Estimate the weight of objects and use a balance to measure the weight of objects. 5. Convert measurements of weight within the customary system. 6. Estimate and measure the capacity of liquids. 7. Convert measurements of capacity within the customary system. 8. Display measurement data in fractions of a unit on a line plot and solve real-world problems. 9. Measure the length of objects to the nearest centimeter and millimeter. 10. Convert measurements of length within the metric system. 11. Estimate the mass of objects and use a balance to measure the mass of objects. 12. Convert measurements of mass within the metric system. 13. Convert measurements of capacity within the metric system.

Unit 11: Geometry	Approximately 3 weeks May/June	**5.G.B.3** **5.G.B.4** **5.MD.C.4** **5.MD.C.5b** **5.MD.C.5c** **<u>Mathematical Practices</u>** **MP.1** **MP.2** **MP.3** **MP.4** **MP.5** **MP.6** **MP.7** **MP.8**	Students will be able to understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category. - *For example, all rectangles have four right angles and squares are rectangles, so all squares have four right angles.* Students will be able to classify two-dimensional figures in a hierarchy based on properties. Students will be able to measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and non-standard units. Students will be able to apply the formulas V = l × w × h and V = B × h for rectangular prisms to find volumes of right rectangular prisms with whole number edge lengths in the context of solving real world and mathematical problems. Students will be able to recognize volume as additive. Find volumes of solid figures composed of two non-overlapping right rectangular prisms by adding the volumes of the non-overlapping parts, applying this	1. Classify two-dimensional figures based on properties. 2. Measure the sides and angles of triangles. 3. Classify triangles based on attributes, such as side measures and angle measures. 4. Measure the sides and angles of quadrilaterals. 5. Classify quadrilaterals based on attributes, such as congruent sides, parallel sides, and right angles. 6. Build nets and explore properties of three-dimensional figures. 7. Describe properties of three-dimensional figures. 8. Use models to find the volume of rectangular prisms. 9. Use volume formulas to find the volume of rectangular prisms. 10. Use models to build composite figures and find the volume of composite figures. 11. Find the volume of composite figures by relating volume to the operations of multiplication and

			technique to solve real world problems.	addition. 12. Make a model to solve problems.

Instructional Unit Map				
Course Title: Math 5				
Unit Title	Unit 1: Place Value		**Start Date:**	September
			Length of Unit:	Approximately 4 weeks
Content Standards *What do we want them to know, understand, & do?*	**5.NBT.A.1** Students will be able to recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left. **5.NBT.A.3** Students will be able to read, write, and compare decimals to thousandths.	**Learning Goals**	1. Explain that a digit in one place represents 1/10 of what it would represent in the place to its left and ten times what it would represent in the place to its right. 2. Compare two decimals to thousandths using >, =, and < for numbers presented as base ten numerals, number names, and/or in expanded form.	

	5.NBT.A.3a Students will be able to read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g., 347.392 = 3 × 100 + 4 × 10 + 7 × 1 + 3 × (1/10) + 9 × (1/100) + 2 × (1/1000). **5.NBT.A.3b** Students will be able to compare two decimals to thousandths based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.		

Essential Questions	● How does the position of a digit in a number relate to its value?		
Assessments *How will we know they have gained the knowledge & skills?*	**Formative**	**Summative**	**Alternative**
	● Problem of the Day ● Common Core Quick Check ● White Board Response ● Homework ● Teacher Observation ● Exit Ticket	● Common Core Review ● Check My Progress ● Quizzes ● Chapter Review ● Chapter Tests	● Unit Choice Menu ● Chapter Project ● Interactive Notebook ● Reflection
Unit Pre-Assessment(s) *What do they already know?*	● Am I Ready? ● IXL Diagnostics ● NWEA		

<table>
<tr><td>Instructional Strategies/Student Activities</td><td colspan="4">

Direct Instruction
Modeling
Note Taking
Vocabulary Cards
Foldables
Partner Work
Cooperative Groups
Flexible Groups
Guided Instruction
Math Games
Task Cards
Center Rotations

</td></tr>
<tr><td rowspan="2">Instructional/Assessment Scaffolds (Modifications /Accommodations) – planned for prior to instruction</td><td>English Language Learners</td><td>Special Education Learners</td><td>Struggling Learners</td><td>Advanced Learners</td></tr>
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Word Wall
Student Vocabulary Cards
Pictures/ Graphics
Manipulatives
Leveled Practice Activities
Classroom Buddy
Preferential Seating
Allow Retakes
Chunk Mathematical Processes
Single Step Directions

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<td>

Word Wall
Student Vocabulary Cards
Pictures/ Graphics
Manipulatives Leveled Practice Activities
Preferential Seating
Allow Retakes
Chunk Mathematical Processes
Extra Time for Processing
Model Tasks

</td>
<td>

Word Wall
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Leveled Practice Activities
Preferential Seating
Allow Retakes
Chunk Mathematical Processes
Extra Time
Provide Examples
Highlight Key Directions
Small Group Instruction

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<td>

Tiered Assignments
Flexible Grouping
Independent Study
Differentiated Instruction

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	• Highlight Key Directions • Extra Time for Processing • Differentiated Instruction	• Provide Examples • Highlight Key Directions • Small Group Instruction • Differentiated Instruction	• Differentiated Instruction	
Differentiated Instructional Methods: *(Multiple means for students to access content and multiple modes for student to express understanding)*	**Access** (Resources and/or Process) • Tiered/Leveled Stations • Interactive Notebook • Vocabulary Cards • Assigned targeted IXL Lessons • Google Classroom		**Expression** (Products and/or Performance) • Choice Menu • Projects • Interactive Notebook	
Vocabulary *Highlight key vocabulary (both Tier II and Tier III words)*	Tier II: period, place Tier III: place value,standard form, expanded form, decimal, decimal point, equivalent decimals			
Integration of Technology SAMR	A and M: Differentiated IXL lessons based on student strengths/weaknesses S: Xtra Math A and M: Games on Google Classroom A and R: Kahoot!			
Interdisciplinary Connections NJ Student Learning Standards	**ELA:** W.5.2.D: Use precise language and domain-specific vocabulary to inform about or explain the topic. SL.5.1: Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher led) with diverse partners on grade 5 topic and texts, building on others' ideas and expressing their own clearly. How to listen and respond to others. **Technology:** 8.1.5.A.1: Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems. 8.1.5.A.3: Use a graphic organizer to organize information about problem or issue.			

<table>
<tr><td></td><td colspan="2">8.2.5.C.4: Collaborate and brainstorm with peers to solve a problem evaluating all solutions to provide the best results with supporting sketches or models.
8.1.5.D.3: Demonstrate an understanding of the need to practice cyber safety, cyber security, and cyber ethics when using technologies and social media.
8.1.5.D.4: Understand digital citizenship and demonstrate an understanding of the personal consequences of inappropriate use of technology and social media.

21st Century Life and Careers:
CRP1: Act as a responsible and contributing citizen and employee.
CRP2: Apply appropriate academic and technical skills.
CRP4: Communicate clearly and effectively and with reason.
CRP8: Utilize critical thinking to make sense of problems and persevere in solving them.</td></tr>
<tr><td rowspan="2">21st Century Themes/Skills
P21 Framework</td><td>Themes</td><td>Skills</td></tr>
<tr><td>Financial, Economic, Business, & Entrepreneurial Literacy
Establish an understanding that career-ready individuals take regular action to contribute to their personal financial wellbeing, understanding that personal financial security provides the peace of mind required to contribute more fully to their own career success.</td><td>Critical Thinking and Problem Solving
Students engage with real world situations involving rational numbers. Students carefully consider the options to solve the problem. Once a solution is agreed upon, they follow through to ensure the problem is solved, whether through their own actions or the actions of others.

Life and Career Skills
Students make connections between abstract concepts with real-world applications, and they make correct insights about when it is appropriate to apply the use of an academic skill in a workplace situation.

Technologies Literacy
Communication & Collaboration Career-ready individuals communicate thoughts, ideas, and action plans with clarity, whether using written, verbal, and/or visual methods. Students collaborate via the integer game, number line discussions and</td></tr>
</table>

		problem solving real world situations involving rational numbers.
Resources/Materials	**Resources:** Text: My Math – McGraw Hill https://www.mheonline.com/mhmymath/ https://www.ixl.com/ https://xtramath.org/ https://www.freckle.com/math/ https://www.sumdog.com/ https://www.prodigygame.com/ https://www.khanacademy.org/math https://njctl.org/courses/math/ https://www.zearn.org/ https://www.illustrativemathematics.org/ https://www.mathlearningcenter.org/resources/lessons/lessons-activities-grade-5 https://parcc.pearson.com/practice-tests/math/ https://achievethecore.org/category/774/mathematics-focus-by-grade-level https://mashupmath.com/ http://www.mathantics.com/ https://www.flocabulary.com/ https://numberock.com/ https://commoncoresheets.com http://www.math-aids.com/ Google Classroom Teacher Generated Resources **Materials:** Interactive Notebooks Chromebooks	

	Manipulatives Whiteboards/Markers Board Games Versa Tiles

Instructional Unit Map				
Course Title: Math 5				
Unit Title	Unit 2: Add and Subtract Decimals		**Start Date:**	October
			Length of Unit:	Approximately 3 Weeks
Content Standards *What do we want them to know, understand, & do?*	**5.NBT.A.4** Students will be able to use place value understanding to round decimals to any place. **5.NBT.B.7** Students will be able to add, subtract, multiply and divide decimals to hundredths, using concrete models or drawings and strategies	**Learning Goals**	1.Round decimals to any place value. 2.Add, subtract, multiply and divide decimals to hundredths using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; explain the reasoning used, relating the strategy to the written method.	

	based on place value, properties of operations, and/or the relationship between addition and subtraction, relate the strategy to a written method and explain the reasoning used.		

Essential Questions	● How can I use place value and properties to add and subtract decimals?		
Assessments *How will we know they have gained the knowledge & skills?*	**Formative**	**Summative**	**Alternative**
	● Problem of the Day ● Common Core Quick Check ● White Board Response ● Homework ● Teacher Observation ● Exit Ticket	● Common Core Review ● Check My Progress ● Quizzes ● Chapter Review ● Chapter Tests	● Unit Choice Menu ● Chapter Project ● Interactive Notebook ● Reflection
Unit Pre-Assessment(s) *What do they already know?*	● Am I Ready? ● IXL Diagnostics ● NWEA		
Instructional Strategies/Student Activities	● Direct Instruction ● Modeling ● Note Taking ● Vocabulary Cards ● Foldables ● Partner Work ● Cooperative Groups ● Flexible Groups ● Guided Instruction		

	• Math Games • Task Cards • Center Rotations			
Instructional/Assessment Scaffolds *(Modifications /Accommodations) – planned for prior to instruction*	**English Language Learners**	**Special Education Learners**	**Struggling Learners**	**Advanced Learners**
	• Word Wall • Student Vocabulary Cards • Pictures/ Graphics • Manipulatives • Leveled Practice Activities • Classroom Buddy • Preferential Seating • Allow Retakes • Chunk Mathematical Processes • Single Step Directions • Highlight Key Directions • Extra Time for Processing • Differentiated Instruction	• Word Wall • Student Vocabulary Cards • Pictures/ Graphics • Manipulatives Leveled Practice Activities • Preferential Seating • Allow Retakes • Chunk Mathematical Processes • Extra Time for Processing • Model Tasks • Provide Examples • Highlight Key Directions • Small Group Instruction • Differentiated	• Word Wall • Student Vocabulary Cards • Pictures/Graphics • Manipulatives • Leveled Practice Activities • Preferential Seating • Allow Retakes • Chunk Mathematical Processes • Extra Time • Provide Examples • Highlight Key Directions • Small Group Instruction • Differentiated Instruction	• Tiered Assignments • Flexible Grouping • Independent Study • Differentiated Instruction

		Instruction		
Differentiated Instructional Methods: *(Multiple means for students to access content and multiple modes for student to express understanding)*	**Access** (Resources and/or Process) • Tiered/Leveled Stations • Interactive Notebook • Vocabulary Cards • Assigned targeted IXL Lessons • Google Classroom		**Expression** (Products and/or Performance) • Choice Menu • Projects • Interactive Notebook	
Vocabulary *Highlight key vocabulary (both Tier II and Tier III words)*	Tier II: greater than, less than, equal to Tier III: Associative Property of Addition, Commutative Property of Addition, Identity Property of Addition, Inverse Operations			
Integration of Technology SAMR	A and M: Differentiated IXL lessons based on student strengths/weaknesses S: Xtra Math A and M: Games on Google Classroom A and R: Kahoot!			
Interdisciplinary Connections NJ Student Learning Standards	**ELA:** W.5.2.D: Use precise language and domain-specific vocabulary to inform about or explain the topic. SL.5.1: Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher led) with diverse partners on grade 5 topic and texts, building on others' ideas and expressing their own clearly. How to listen and respond to others. **Technology:** 8.1.5.A.1: Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems. 8.1.5.A.3: Use a graphic organizer to organize information about problem or issue. 8.2.5.C.4: Collaborate and brainstorm with peers to solve a problem evaluating all solutions to provide the best results with supporting sketches or models. 8.1.5.D.3: Demonstrate an understanding of the need to practice cyber safety, cyber security, and cyber ethics when using technologies and social media. 8.1.5.D.4: Understand digital citizenship and demonstrate an understanding of the personal consequences of inappropriate use of technology and social media.			

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Students engage with real world situations involving rational numbers. Students carefully consider the options to solve the problem. Once a solution is agreed upon, they follow through to ensure the problem is solved, whether through their own actions or the actions of others.

Life and Career Skills
Students make connections between abstract concepts with real-world applications, and they make correct insights about when it is appropriate to apply the use of an academic skill in a workplace situation.

Technologies Literacy
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Instructional Unit Map				
Course Title: Math 5				
Unit Title	Units 3 Multiply Whole Numbers and Decimal Numbers		**Start Date:**	October
			Length of Unit:	Approximately 5 Weeks
Content Standards *What do we want them to know, understand, & do?*	**5.NBT.A.2** Students will be able to explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10. **5.NBT.B.5** Students will be able to fluently multiply multi-digit whole numbers using the standard algorithm. **5.NBT.B.7** Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the	**Learning Goals**	1. Explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10; represent powers of 10 using whole-number exponents. 2. Fluently multiply multi-digit whole numbers with accuracy and efficiency. 3. Add, subtract, multiply and divide decimals to hundredths using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; explain the reasoning used, relating the strategy to the written method.	

	relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.		
Essential Questions	● What strategies can be used to multiply whole numbers? ● How is multiplying decimals similar to multiplying whole numbers?		
Assessments *How will we know they have gained the knowledge & skills?*	**Formative**	**Summative**	**Alternative**
	● Problem of the Day ● Common Core Quick Check ● White Board Response ● Homework ● Teacher Observation ● Exit Ticket	● Common Core Review ● Check My Progress ● Quizzes ● Chapter Review ● Chapter Tests	● Unit Choice Menu ● Chapter Project ● Interactive Notebook ● Reflection
Unit Pre-Assessment(s) *What do they already know?*	● Am I Ready? ● IXL Diagnostics ● NWEA		
Instructional Strategies/Student Activities	● Direct Instruction ● Modeling ● Note Taking ● Vocabulary Cards ● Foldables ● Partner Work ● Cooperative Groups ● Flexible Groups ● Guided Instruction ● Math Games		

	• Task Cards • Center Rotations			
Instructional/Assessment Scaffolds *(Modifications /Accommodations) – planned for prior to instruction*	**English Language Learners**	**Special Education Learners**	**Struggling Learners**	**Advanced Learners**
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Google Classroom</td><td>Choice Menu
Projects
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<tr><td>Vocabulary
Highlight key vocabulary (both Tier II and Tier III words)</td><td colspan="2">Tier II: base, compatible numbers, cubed, exponent, power, power of 10

Tier III: prime factorization, Distributive Property</td></tr>
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SAMR</td><td colspan="2">A and M: Differentiated IXL lessons based on student strengths/weaknesses
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A and M: Games on Google Classroom
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How to listen and respond to others.

Technology:
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Instructional Unit Map					
Course Title: Math 5					
Unit Title	Unit 4: Divide by a One-Digit Divisor		**Start Date:**	December	
			Length of Unit:	Approximately 4 Weeks	
Content Standards *What do we want them to know, understand, & do?*	**5.NBT.B.6** Students will be able to find whole-number quotients of whole numbers with up to four-digit dividends and two-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.	**Learning Goals**	1. Calculate whole number quotients of whole numbers with 4-digit dividends and 2-digit divisors; explain and represent calculations with equations, rectangular arrays, and area models.Fluently multiply multi-digit whole numbers with accuracy and efficiency.		
Essential Questions	● What strategies can be used to divide whole numbers?				
Assessments *How will we know they have gained the knowledge & skills?*	**Formative**		**Summative**		**Alternative**
	● Problem of the Day ● Common Core Quick Check ● White Board Response ● Homework ● Teacher Observation ● Exit Ticket		● Common Core Review ● Check My Progress ● Quizzes ● Chapter Review ● Chapter Tests		● Unit Choice Menu ● Chapter Project ● Interactive Notebook ● Reflection

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What do they already know?</td><td colspan="4">• Am I Ready?
• IXL Diagnostics
• NWEA</td></tr>
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	Directions • Highlight Key Directions • Extra Time for Processing • Differentiated Instruction	Mathematical Processes • Extra Time for Processing • Model Tasks • Provide Examples • Highlight Key Directions • Small Group Instruction • Differentiated Instruction		
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Vocabulary *Highlight key vocabulary (both Tier II and Tier III words)*	Tier II: dividend, divisor, fact family, remainder, unknown, variable, quotient Tier III: partial quotients			
Integration of Technology SAMR	A and M: Differentiated IXL lessons based on student strengths/weaknesses S: Xtra Math A and M: Games on Google Classroom A and R: Kahoot!			
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Instructional Unit Map				
Course Title: Math 5				
Unit Title	Units 5: Divide by a Two-Digit Divisor		**Start Date:**	January
			Length of Unit:	Approximately 4 Weeks
Content Standards *What do we want them to know, understand, & do?*	**5.NBT.B.6** Students will be able to find whole-number quotients of whole numbers with up to four-digit dividends and two-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. **5.NBT.B.7**	**Learning Goals**	1. Calculate whole number quotients of whole numbers with 4-digit dividends and 2-digit divisors; explain and represent calculations with equations, rectangular arrays, and area models.Fluently multiply multi-digit whole numbers with accuracy and efficiency. 2. Add, subtract, multiply and divide decimals to hundredths using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; explain the reasoning used, relating the strategy to the written method.	

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Essential Questions	● What strategies can be used to divide whole numbers? ● How is dividing decimals similar to dividing whole numbers?		
Assessments *How will we know they have gained the knowledge & skills?*	**Formative**	**Summative**	**Alternative**
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Resources/Materials	**Resources:** Text: My Math – McGraw Hill https://www.mheonline.com/mhmymath/ https://www.ixl.com/ https://xtramath.org/ https://www.freckle.com/math/ https://www.sumdog.com/ https://www.prodigygame.com/ https://www.khanacademy.org/math https://njctl.org/courses/math/ https://www.zearn.org/ https://www.illustrativemathematics.org/ https://www.mathlearningcenter.org/resources/lessons/lessons-activities-grade-5 https://parcc.pearson.com/practice-tests/math/ https://achievethecore.org/category/774/mathematics-focus-by-grade-level https://mashupmath.com/ http://www.mathantics.com/ https://www.flocabulary.com/ https://numberock.com/ https://commoncoresheets.com http://www.math-aids.com/ Google Classroom Teacher Generated Resources **Materials:** Interactive Notebooks Chromebooks Manipulatives Whiteboards/Markers	

	Board Games Versa Tiles

Instructional Unit Map			
Course Title: Math 5			
Unit Title	Unit 6: Expressions and Patterns	**Start Date:**	February
		Length of Unit:	Approximately 2 Weeks
Content Standards *What do we want them to know, understand, & do?*	**5.OA.A.1** Students will be able to use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols. **5.OA.A.2** Students will be able to write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. - For example, express the calculation "add 8 and 7, then multiply by 2" as 2 × (8 + 7). Recognize that 3 × (18932 + 921) is three times as large as 18932 + 921, without having to calculate	**Learning Goals**	1. Evaluate numerical expressions that contain parentheses, brackets and braces. 2. Write numerical expressions when given a verbal description or word problem; interpret numerical expressions without evaluating them. 3. Generate two numerical patterns from two given rules, identify the relationship between corresponding terms, create ordered pairs and graph the ordered pairs. 4. Represent real world and mathematical problems by graphing points defined by whole number coordinates in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.

	the indicated sum or product. **5.OA.B.3** Students will be able to generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane. - *For example, given the rule "Add 3" and the starting number 0, and given the rule "Add 6" and the starting number 0, generate terms in the resulting sequences, and observe that the terms in one sequence are twice the corresponding terms in the other sequence. Explain informally why this is so.* **5.G.A.1** Students will be able to use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates. Understand that		

	the first number indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis, with the convention that the names of the two axes and the coordinates correspond (*e.g., x-axis and x-coordinate, y-axis and y-coordinate*). **5.G.A.2** Students will be able to represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.		
Essential Questions	● How are patterns used to solve problems?		
Assessments *How will we know they have gained the knowledge & skills?*	**Formative** ● Problem of the Day ● Common Core Quick Check ● White Board Response ● Homework ● Teacher Observation ● Exit Ticket	**Summative** ● Common Core Review ● Check My Progress ● Quizzes ● Chapter Review ● Chapter Tests	**Alternative** ● Unit Choice Menu ● Chapter Project ● Interactive Notebook ● Reflection

<table>
<tr><td>Unit Pre-Assessment(s)
What do they already know?</td><td colspan="4">• Am I Ready?
• IXL Diagnostics
• NWEA</td></tr>
<tr><td>Instructional Strategies/Student Activities</td><td colspan="4">• Direct Instruction
• Modeling
• Note Taking
• Vocabulary Cards
• Foldables
• Partner Work
• Cooperative Groups
• Flexible Groups
• Guided Instruction
• Math Games
• Task Cards
• Center Rotations</td></tr>
<tr><td rowspan="2">Instructional/Assessment Scaffolds (Modifications /Accommodations) – planned for prior to instruction</td><td>English Language Learners</td><td>Special Education Learners</td><td>Struggling Learners</td><td>Advanced Learners</td></tr>
<tr><td>• Word Wall
• Student Vocabulary Cards
• Pictures/ Graphics
• Manipulatives
• Leveled Practice Activities
• Classroom Buddy
• Preferential Seating
• Allow Retakes
• Chunk Mathematical Processes
• Single Step</td><td>• Word Wall
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• Extra Time
• Provide Examples
• Highlight Key Directions
• Small Group Instruction
• Differentiated Instruction</td><td>• Tiered Assignments
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</table>

<table>
<tr><td></td><td>Directions
● Highlight Key Directions
● Extra Time for Processing
● Differentiated Instruction</td><td>Mathematical Processes
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<tr><td rowspan="2">Differentiated Instructional Methods:
(Multiple means for students to access content and multiple modes for student to express understanding)</td><td colspan="2">Access (Resources and/or Process)</td><td colspan="2">Expression (Products and/or Performance)</td></tr>
<tr><td colspan="2">● Tiered/Leveled Stations
● Interactive Notebook
● Vocabulary Cards
● Assigned targeted IXL Lessons
● Google Classroom</td><td colspan="2">● Choice Menu
● Projects
● Interactive Notebook</td></tr>
<tr><td>Vocabulary
Highlight key vocabulary (both Tier II and Tier III words)</td><td colspan="4">Tier II: evaluate, numerical expression, origin, sequence, term

Tier III: coordinate plane, ordered pair, order of operations</td></tr>
<tr><td>Integration of Technology
SAMR</td><td colspan="4">A and M: Differentiated IXL lessons based on student strengths/weaknesses
S: Xtra Math
A and M: Games on Google Classroom
A and R: Kahoot!</td></tr>
<tr><td>Interdisciplinary Connections
NJ Student Learning Standards</td><td colspan="4">ELA:
W.5.2.D: Use precise language and domain-specific vocabulary to inform about or explain the topic.
SL.5.1: Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher led) with diverse partners on grade 5 topic and texts, building on others' ideas and expressing their own clearly.
How to listen and respond to others.</td></tr>
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<tr><td></td><td colspan="2">Technology:
8.1.5.A.1: Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems.
8.1.5.A.3: Use a graphic organizer to organize information about problem or issue.
8.2.5.C.4: Collaborate and brainstorm with peers to solve a problem evaluating all solutions to provide the best results with supporting sketches or models.
8.1.5.D.3: Demonstrate an understanding of the need to practice cyber safety, cyber security, and cyber ethics when using technologies and social media.
8.1.5.D.4: Understand digital citizenship and demonstrate an understanding of the personal consequences of inappropriate use of technology and social media.

21st Century Life and Careers:
CRP1: Act as a responsible and contributing citizen and employee.
CRP2: Apply appropriate academic and technical skills.
CRP4: Communicate clearly and effectively and with reason.
CRP8: Utilize critical thinking to make sense of problems and persevere in solving them.</td></tr>
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P21 Framework</td><td>Themes</td><td>Skills</td></tr>
<tr><td>Financial, Economic, Business, & Entrepreneurial Literacy
Establish an understanding that career-ready individuals take regular action to contribute to their personal financial wellbeing, understanding that personal financial security provides the peace of mind required to contribute more fully to their own career success.</td><td>Critical Thinking and Problem Solving
Students engage with real world situations involving rational numbers. Students carefully consider the options to solve the problem. Once a solution is agreed upon, they follow through to ensure the problem is solved, whether through their own actions or the actions of others.

Life and Career Skills
Students make connections between abstract concepts with real-world applications, and they make correct insights about when it is appropriate to apply the use of an academic skill in a workplace situation.</td></tr>
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		Technologies Literacy Communication & Collaboration Career-ready individuals communicate thoughts, ideas, and action plans with clarity, whether using written, verbal, and/or visual methods. Students collaborate via the integer game, number line discussions and problem solving real world situations involving rational numbers.
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	Google Classroom Teacher Generated Resources **Materials:** Interactive Notebooks Chromebooks Manipulatives Whiteboards/Markers Board Games Versa Tiles

Instructional Unit Map			
Course Title: Math 5			
Unit Title	Unit 7: Fractions and Decimals	**Start Date:**	February
		Length of Unit:	Approximately 3 weeks
Content Standards *What do we want them to know, understand, & do?*	**5.NF.A.2** Students will be able to solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of	**Learning Goals**	1. Solve word problems involving adding or subtracting fractions with unlike denominators, and determine if the answer to the word problem is reasonable, using estimations with benchmark fractions. 2. Interpret a fraction as a division of the numerator by the denominator; solve word problems in which division of whole numbers leads to fractions or mixed numbers as solutions. 3. Explain how a product is related to the magnitude of the factors, including cases in which one factor is a fraction greater than 1 and cases in which one factor is a fraction less than 1.

	answers. **5.NF.B.3** Students will be able to Interpret a fraction as division of the numerator by the denominator (a/b = a ÷ b). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers, e.g., by using visual fraction models or equations to represent the problem. **5.NF.B.5b** Students will be able to explain why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relating the principle of fraction equivalence a/b = (n×a)/(n×b) to the effect of multiplying a/b by 1. **5.NBT.B.5** Students will be able to fluently multiply multi-digit		

<table>
<tr><td></td><td>whole numbers using the standard algorithm.</td><td></td><td></td></tr>
<tr><td>Essential Questions</td><td colspan="3">● How are factors and multiples helpful in solving problems?</td></tr>
<tr><td rowspan="2">Assessments
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<tr><td>● Problem of the Day
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● White Board Response
● Homework
● Teacher Observation
● Exit Ticket</td><td>● Common Core Review
● Check My Progress
● Quizzes
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<tr><td>Unit Pre-Assessment(s)
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Instructional/Assessment Scaffolds *(Modifications /Accommodations) – planned for prior to instruction*	**English Language Learners**	**Special Education Learners**	**Struggling Learners**	**Advanced Learners**
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Differentiated Instructional Methods: *(Multiple means for students to*	**Access** (Resources and/or Process)		**Expression** (Products and/or Performance)	

access content and multiple modes for student to express understanding)	• Tiered/Leveled Stations • Interactive Notebook • Vocabulary Cards • Assigned targeted IXL Lessons • Google Classroom	• Choice Menu • Projects • Interactive Notebook
Vocabulary *Highlight key vocabulary (both Tier II and Tier III words)*	Tier II: common factor, common multiple, denominator, equivalent fractions, fraction Tier III: greatest common factor (GCF), least common denominator (LCD), least common multiple (LCM)	
Integration of Technology SAMR	A and M: Differentiated IXL lessons based on student strengths/weaknesses S: Xtra Math A and M: Games on Google Classroom A and R: Kahoot!	
Interdisciplinary Connections NJ Student Learning Standards	**ELA:** W.5.2.D: Use precise language and domain-specific vocabulary to inform about or explain the topic. SL.5.1: Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher led) with diverse partners on grade 5 topic and texts, building on others' ideas and expressing their own clearly. How to listen and respond to others. **Technology:** 8.1.5.A.1: Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems. 8.1.5.A.3: Use a graphic organizer to organize information about problem or issue. 8.2.5.C.4: Collaborate and brainstorm with peers to solve a problem evaluating all solutions to provide the best results with supporting sketches or models. 8.1.5.D.3: Demonstrate an understanding of the need to practice cyber safety, cyber security, and cyber ethics when using technologies and social media. 8.1.5.D.4: Understand digital citizenship and demonstrate an understanding of the personal consequences of inappropriate use of technology and social media. **21st Century Life and Careers:** CRP1: Act as a responsible and contributing citizen and employee.	

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CRP4: Communicate clearly and effectively and with reason.
CRP8: Utilize critical thinking to make sense of problems and persevere in solving them.</td></tr>
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P21 Framework</td><td>Themes</td><td>Skills</td></tr>
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Establish an understanding that career-ready individuals take regular action to contribute to their personal financial wellbeing, understanding that personal financial security provides the peace of mind required to contribute more fully to their own career success.</td><td>Critical Thinking and Problem Solving
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Instructional Unit Map			
Course Title: Math 5			
Unit Title	Unit 8: Add and Subtract Fractions	**Start Date:**	March
		Length of Unit:	Approximately 3 weeks
Content Standards *What do we want them to know, understand, & do?*	**5.NF.A.1** Students will be able to add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators. **5.NF.A.2** Students will be able to solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers.	**Learning Goals**	1. Add and subtract fractions (including mixed numbers) with unlike denominators by replacing the given fractions with equivalent fractions having like denominators. 2. Solve word problems involving adding or subtracting fractions with unlike denominators, and determine if the answer to the word problem is reasonable, using estimations with benchmark fractions.

<table>
<tr><td>Essential Questions</td><td colspan="4">● How can equivalent fractions help me add and subtract fractions?</td></tr>
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How will we know they have gained the knowledge & skills?</td><td>Formative</td><td colspan="2">Summative</td><td>Alternative</td></tr>
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Differentiated Instructional Methods: *(Multiple means for students to access content and multiple modes for student to express understanding)*	**Access** (Resources and/or Process) • Tiered/Leveled Stations • Interactive Notebook • Vocabulary Cards • Assigned targeted IXL Lessons • Google Classroom		**Expression** (Products and/or Performance) • Choice Menu • Projects • Interactive Notebook	

Vocabulary *Highlight key vocabulary (both Tier II and Tier III words)*	Tier II: like fractions, unlike fractions Tier III:
Integration of Technology SAMR	A and M: Differentiated IXL lessons based on student strengths/weaknesses S: Xtra Math A and M: Games on Google Classroom A and R: Kahoot!
Interdisciplinary Connections NJ Student Learning Standards	**ELA:** W.5.2.D: Use precise language and domain-specific vocabulary to inform about or explain the topic. SL.5.1: Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher led) with diverse partners on grade 5 topic and texts, building on others' ideas and expressing their own clearly. How to listen and respond to others. **Technology:** 8.1.5.A.1: Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems. 8.1.5.A.3: Use a graphic organizer to organize information about problem or issue. 8.2.5.C.4: Collaborate and brainstorm with peers to solve a problem evaluating all solutions to provide the best results with supporting sketches or models. 8.1.5.D.3: Demonstrate an understanding of the need to practice cyber safety, cyber security, and cyber ethics when using technologies and social media. 8.1.5.D.4: Understand digital citizenship and demonstrate an understanding of the personal consequences of inappropriate use of technology and social media. **21st Century Life and Careers:** CRP1: Act as a responsible and contributing citizen and employee. CRP2: Apply appropriate academic and technical skills. CRP4: Communicate clearly and effectively and with reason. CRP8: Utilize critical thinking to make sense of problems and persevere in solving them.

21st Century Themes/Skills P21 Framework	Themes	Skills
	Financial, Economic, Business, & Entrepreneurial Literacy Establish an understanding that career-ready individuals take regular action to contribute to their personal financial wellbeing, understanding that personal financial security provides the peace of mind required to contribute more fully to their own career success.	**Critical Thinking and Problem Solving** Students engage with real world situations involving rational numbers. Students carefully consider the options to solve the problem. Once a solution is agreed upon, they follow through to ensure the problem is solved, whether through their own actions or the actions of others. **Life and Career Skills** Students make connections between abstract concepts with real-world applications, and they make correct insights about when it is appropriate to apply the use of an academic skill in a workplace situation. **Technologies Literacy** Communication & Collaboration Career-ready individuals communicate thoughts, ideas, and action plans with clarity, whether using written, verbal, and/or visual methods. Students collaborate via the integer game, number line discussions and problem solving real world situations involving rational numbers.
Resources/Materials	**Resources:** Text: My Math – McGraw Hill https://www.mheonline.com/mhmymath/ https://www.ixl.com/ https://xtramath.org/ https://www.freckle.com/math/ https://www.sumdog.com/ https://www.prodigygame.com/ https://www.khanacademy.org/math https://njctl.org/courses/math/	

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Instructional Unit Map			
Course Title: Math 5			
Unit Title	Unit 9: Multiply and Divide Fractions	**Start Date:**	April
		Length of Unit:	Approximately 3 weeks

Content Standards *What do we want them to know, understand, & do?*	**5.NF.B.4a** Students will be able to interpret the product (a/b) × q as a parts of a partition of q into b equal parts; equivalently, as the result of a sequence of operations a × q ÷ b. - *For example, use a visual fraction model to show (2/3) × 4 = 8/3, and create a story context for this equation. Do the same with (2/3) × (4/5) = 8/15. (In general, (a/b) × (c/d) = ac/bd.)* **5.NF.B.4b** Students will be able to find the area of a rectangle with fractional side lengths by tiling it with unit squares of the appropriate unit fraction side lengths, and show that the area is the same as would be found by multiplying the side lengths. Multiply fractional side lengths to find areas of rectangles, and represent fraction products as rectangular areas. **5.NF.B.5a** Students will be able to compare the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated	**Learning Goals**	1. For whole number or fraction *q*, interpret the product (*a/b*) x *q* as *a* parts of a whole partitioned into *b* equal parts added *q* times (e.g. using a visual fraction model). 2. Tile a rectangle with unit fraction squares to find the area and multiply side lengths to find the area of the rectangle, showing that the areas are the same. 3. Explain how a product is related to the magnitude of the factors, including cases in which one factor is greater than 1 and cases in which One factor is a fraction less than 1. 4. Divide a unit fraction by a non-zero whole number and interpret by creating a story context or visual fraction model. 5. Solve real-world problems involving division of unit fractions by whole numbers or whole numbers by unit fractions.

	multiplication. **5.NF.B.7a** Students will be able to interpret division of a unit fraction by a non-zero whole number, and compute such quotients. *- For example, create a story context for (1/3) ÷ 4, and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that (1/3) ÷ 4 = 1/12 because (1/12) × 4 = 1/3.* **5.NF.B.7c** Students will be able to solve real world problems involving multiplication of fractions and mixed numbers, *e.g., by using visual fraction models or equations to represent the problem*.		

Essential Questions	● What strategies can be used to multiply and divide fractions?		
Assessments *How will we know they have gained the knowledge & skills?*	**Formative**	**Summative**	**Alternative**
	● Problem of the Day ● Common Core Quick Check ● White Board Response ● Homework	● Common Core Review ● Check My Progress ● Quizzes ● Chapter Review ● Chapter Tests	● Unit Choice Menu ● Chapter Project ● Interactive Notebook ● Reflection

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<tr><td></td><td>Teacher Observation
Exit Ticket</td><td></td><td></td></tr>
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Extra Time</td><td>Tiered Assignments
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Vocabulary *Highlight key vocabulary (both Tier II and Tier III words)*	Tier II: scaling, unit fraction Tier III:			
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SL.5.1: Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher led) with diverse partners on grade 5 topic and texts, building on others' ideas and expressing their own clearly.
How to listen and respond to others.

Technology:
8.1.5.A.1: Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems.
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P21 Framework</td><td>Themes</td><td>Skills</td></tr>
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Establish an understanding that career-ready individuals take regular action to contribute to their personal financial wellbeing, understanding that personal financial security provides the peace of mind required to contribute more fully to their own career success.</td><td>Critical Thinking and Problem Solving
Students engage with real world situations involving rational numbers. Students carefully consider the options to solve the problem. Once a solution is agreed upon, they follow through to ensure the problem is solved, whether through their own actions or the actions of others.</td></tr>
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		Life and Career Skills Students make connections between abstract concepts with real-world applications, and they make correct insights about when it is appropriate to apply the use of an academic skill in a workplace situation. **Technologies Literacy** Communication & Collaboration Career-ready individuals communicate thoughts, ideas, and action plans with clarity, whether using written, verbal, and/or visual methods. Students collaborate via the integer game, number line discussions and problem solving real world situations involving rational numbers.
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	https://numberock.com/ https://commoncoresheets.com http://www.math-aids.com/ Google Classroom Teacher Generated Resources **Materials:** Interactive Notebooks Chromebooks Manipulatives Whiteboards/Markers Board Games Versa Tiles

Instructional Unit Map				
Course Title: Math 5				
Unit Title	Unit 10: Measurement		**Start Date:**	April
			Length of Unit:	Approximately 3 weeks
Content Standards *What do we want them to know, understand, & do?*	**5.MD.A.1** Students will be able to convert among different-sized standard measurement units within a given measurement system *-For example, convert 5 cm to*	**Learning Goals**	1. Convert standard measurement units within the same system (e.g., Centimeters to meters) in order to solve multi-step problems. 2. Make a line plot to display a data set in measurements in fractions of a unit (½, ¼, ⅛) and use it to solve problems involving the four operations on fractions with unlike denominators.	

	0.05 m, and use these conversions in solving multi-step, real world problems. **5.MD.B.2** Students will be able to make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Use operations on fractions for this grade to solve problems involving information presented in line plots. - *For example, given different measurements of liquid in identical beakers, find the amount of liquid each beaker would contain if the total amount in all the beakers were redistributed equally.*		

Essential Questions	● How can I use measurement conversions to solve real-world problems?		
Assessments *How will we know they have gained the knowledge & skills?*	**Formative**	**Summative**	**Alternative**
	● Problem of the Day ● Common Core Quick Check ● White Board Response ● Homework ● Teacher Observation ● Exit Ticket	● Common Core Review ● Check My Progress ● Quizzes ● Chapter Review ● Chapter Tests	● Unit Choice Menu ● Chapter Project ● Interactive Notebook ● Reflection

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• IXL Diagnostics
• NWEA</td></tr>
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	Directions • Highlight Key Directions • Extra Time for Processing • Differentiated Instruction	Mathematical Processes • Extra Time for Processing • Model Tasks • Provide Examples • Highlight Key Directions • Small Group Instruction • Differentiated Instruction		
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Vocabulary *Highlight key vocabulary (both Tier II and Tier III words)*	Tier II: capacity, centimeter (cm), convert, cup (c), customary system, fair share, fluid ounce, foot (ft), gallon (gal), gram (g), inch (in.), kilogram (kg), kilometer (km), length, liter (L), mass, meter (m), metric system, mile (mi), milligram (mg), milliliter (mL), millimeter (mm), ounce (oz), pint (pt), pound (lb), quart (qt), ton (T), weight, yard (yd) Tier III:			
Integration of Technology SAMR	A and M: Differentiated IXL lessons based on student strengths/weaknesses S: Xtra Math A and M: Games on Google Classroom A and R: Kahoot!			
Interdisciplinary Connections NJ Student Learning Standards	**ELA:** W.5.2.D: Use precise language and domain-specific vocabulary to inform about or explain the topic. SL.5.1: Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher led) with diverse partners on grade 5 topic and texts, building on others' ideas and expressing their own clearly.			

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Students engage with real world situations involving rational numbers. Students carefully consider the options to solve the problem. Once a solution is agreed upon, they follow through to ensure the problem is solved, whether through their own actions or the actions of others.

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	Teacher Generated Resources **Materials:** Interactive Notebooks Chromebooks Manipulatives Whiteboards/Markers Board Games Versa Tiles

Instructional Unit Map				
Course Title: Math 5				
Unit Title	Unit 11: Geometry		**Start Date:**	May
			Length of Unit:	Approximately 3 weeks
Content Standards *What do we want them to know, understand, & do?*	**5.G.B.3** Students will be able to understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category. - *For example, all rectangles have four right angles and squares are rectangles, so all squares have four right angles.* **5.G.B.4** Students will be able to	**Learning Goals**	1. Classify two-dimensional figures in a hierarchy based on properties. 2. Measure volume by counting the total number cubic units required to fill a figure without gaps or overlaps. 3. Apply formulas to solve real-world and mathematical problems involving volumes of right rectangular prisms that have whole number edge lengths. 4. Find the volume of a composite solid figure composed of two non-overlapping right rectangular prisms, applying this strategy to solve real-world problems.	

	classify two-dimensional figures in a hierarchy based on properties. **5.MD.C.4** Students will be able to measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and non-standard units. **5.MD.C.5b** Students will be able to apply the formulas V = l × w × h and V = B × h for rectangular prisms to find volumes of right rectangular prisms with whole number edge lengths in the context of solving real world and mathematical problems. **5.MD.C.5c** Students will be able to recognize volume as additive. Find volumes of solid figures composed of two non-overlapping right rectangular prisms by adding the volumes of the non-overlapping parts, applying this technique to solve real world problems.		

Essential Questions	• How does geometry help me solve problems in everyday life?		
Assessments *How will we know they have gained the knowledge & skills?*	**Formative** • Problem of the Day • Common Core Quick Check • White Board Response • Homework • Teacher Observation • Exit Ticket	**Summative** • Common Core Review • Check My Progress • Quizzes • Chapter Review • Chapter Tests	**Alternative** • Unit Choice Menu • Chapter Project • Interactive Notebook • Reflection
Unit Pre-Assessment(s) *What do they already know?*	• Am I Ready? • IXL Diagnostics • NWEA		
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Vocabulary *Highlight key vocabulary (both Tier II and Tier III words)*	Tier II: attribute, base, congruent angles, congruent figures, congruent sides, cube, cubic unit, edge, face, hexagon, net, octagon, parallelogram, pentagon, polygon, prism, rectangle, rectangular prism, rhombus, square, three-dimensional figure, trapezoid, triangular prism, unit cube, vertex, volume Tier III: acute triangle, composite figures, equilateral triangle, isosceles triangle, obtuse triangle, regular polygon, right triangle, scalene triangle
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21st Century Themes/Skills P21 Framework	Themes	Skills
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