Overview	Standards for Mathematical Content	Unit Focus	Standards for Mathematical Practice
Unit 1 **Understanding the Place Value System**	• 5.OA.A.1 • 5.OA.A.2 • 5.NBT.A.1 • 5.NBT.A.2* • 5.NBT.B.5* • 5.NBT.B.6 • 5.NBT.A.3 • 5.NBT.A.4	• Write and interpret numerical expressions • Understand the place value system • Perform operations with multi-digit whole numbers and with decimals to hundredths	MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others.
Unit 1: ***Suggested Open Educational Resources***	5.OA.A.1 Using Operations and Parentheses 5.OA.A.1 Watch out for Parentheses 1 5.NBT.A.1 Which number is it? 5.NBT.A.1 Millions and Billions of People 5.NBT.A.3 Placing Thousandths on the Number Line 5.NBT.A.4 Rounding to Tenths and Hundredths 5.NBT.B.5 Elmer's Multiplication Error		
Unit 2 **Understanding Volume and Operations on Fractions**	• 5.MD.C.3 • 5.MD.C.4 • 5.MD.C.5 • 5.NBT.B.5* • 5.NF.A.1 • 5.NF.A.2 • 5.NF.B.3 • 5.NF.B.4	• Understand concepts of volume • Perform operations with multi-digit whole numbers and with decimals to hundredths • Use equivalent fractions as a strategy to add and subtract fractions • Apply and extend previous understandings of multiplication and division	MP.4 Model with mathematics. MP.5 Use appropriate tools strategically.

Key: Major Clusters | Supporting | Additional Clusters | * Benchmarked

Unit 2: ***Suggested Open Educational Resources***	5.MD.C.5 Breaking Apart Composite Solids 5.MD.C.5a using Volume to Understand the Associative Property of Multiplication 5.MD.C.5b Cari's Aquarium 5.MD.C Box of Clay 5.NF.A.1 Making S'Mores 5.NF.A.2 Do These Add Up? 5.NF.A Measuring Cups 5.NF.B.3 How Much Pie? 5.NF.B.4b Chavone's Bathroom Tiles		MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.
Unit 3 **More Operations on Fractions**	• 5.NF.B.4b • 5.NF.B.5 • 5.NF.B.6 • 5.NF.B.7* • 5.NBT.A.2* • 5.NBT.B.7* • 5.MD.A.1	• Apply and extend previous understandings of multiplication and division • Understand the place value system • Perform operations with multi-digit whole numbers and with decimals to hundredths • Convert like measurement units within a given measurement system	MP.1 Make sense of problems and persevere in solving them.
Unit 3: ***Suggested Open Educational Resources***	5.NF.B.4b New Park 5.NF.B.5 Comparing Heights of Buildings 5.NF.B.5 Grass Seedlings 5.NF.B.5b Mrs. Gray's Homework Assignment 5.NF.B.6 To Multiply or not to multiply?		MP.2 Reason abstractly and quantitatively.

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	5.NF.B.7 Banana Pudding 5.NBT.A.2 Multiplying Decimals by 10 5.NBT.A.2 Marta's Multiplication Error 5.NBT.B.7 The Value of Education 5.MD.A.1, 5.NF.B.3 Converting Fractions of a Unit into a Smaller Unit		MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.
Unit 4 **Coordinate Geometry and Classifying Figures**	• 5.G.A.1 • 5.G.A.2 • 5.OA.B.3 • 5.G.B.3 • 5.G.B.4 • 5.MD.B.2 • 5.NBT.B.5* • 5.NBT.B.7* • 5.NF.B.7*	• Graph points on the coordinate plane to solve real-world and mathematical problems • Analyze patterns and relationships • Classify two dimensional figures into categories based on their properties • Represent and interpret data • Perform operations with multi-digit whole numbers and with decimals to hundredths • Apply and extend previous understanding of multiplication and division	
Unit 4: ***Suggested Open Educational Resources***	5.G.A.1 Battle Ship Using Grid Paper 5.G.A.2 Meerkat Coordinate Plane Task 5.OA.B.3 Sidewalk Patterns 5.G.B.3 Always, Sometimes, Never 5.G.B.4 What is a Trapezoid? (Part 2) 5.MD.B.2 5.NF.A.1 Fractions on a Line Plot 5.NBT.B.7, 5.NF.B.3 What is 23 divided by 5?		

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	5.NF.B.7c Salad Dressing	

21st Century Life and Careers Career Awareness, Exploration, and Preparation	9.2.4.A.1 Identify reasons why people work, different types of work, and how work can help a person achieve personal and professional goals. 9.2.4.A.2 Identify various life roles and civic and work-related activities in the school, home, and community. types of work, and how work can help a person achieve personal and professional goals.
CRP Standards	CRP2. Apply appropriate academic and technical skills. CRP4. Communicate clearly and effectively and with reason. CRP6. Demonstrate creativity and innovation. CRP8. Utilize critical thinking to make sense of problems and persevere in solving them. CRP11. Use technology to enhance productivity. CRP12. Work productively in teams while using cultural global competence.
ELA Standards	RI.3.1. Ask and answer questions, and make relevant connections to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers. RI.3.4. Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 3 topic or subject area. RI.3.7. Use information gained from text features (e.g., illustrations, maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur). W.3.5. With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing. SL.3.2. Determine the main ideas and supporting details of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally
Technology Standards	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.C.1 Engage in online discussions with learners of other cultures to investigate a worldwide issue from multiple perspectives and sources, evaluate findings and present possible solutions, using digital tools and online resources for all steps. 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.

Key: Major Clusters | Supporting | Additional Clusters | * Benchmarked

	8.1.5.E.1 Use digital tools to research and evaluate the accuracy of, relevance to, and appropriateness of using print and non-print electronic information sources to complete a variety of tasks.

Unit 1 Grade 5 – Place value and the number system

Key: Major Clusters | Supporting | Additional Clusters | * Benchmarked

Content Standards	Suggested Standards for Mathematical Practice	Transfer
● 5.OA.A.1. Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.	MP.1 Make sense of problems and persevere in solving them. MP.5 Use appropriate tools strategically. MP.8 Look for and express regularity in repeated reasoning.	Concept(s): ● Standard convention for performing operations (Order of operations, including grouping symbols) Students are able to: ● evaluate numerical expressions that include grouping symbols (parentheses, brackets or braces). ● evaluate numerical expressions that include nested grouping symbols (for example, 3 x [5 + (7 - 3)]). Learning Goal 1: Evaluate numerical expressions that contain parentheses, brackets and braces.
● 5.OA.A.2. Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. *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.*	MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning	Concept(s): ● Order of operations, including grouping symbols. Students are able to: ● write a simple numerical expression when given a verbal description. ● interpret the quantitative relationships in numerical expressions without evaluating (simplifying) the expression. Learning Goal 2: Write numerical expressions when given a verbal description or word problem; interpret numerical expressions without evaluating them.
● 5.NBT.A.1. 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.	MP.2 Reason abstractly and quantitatively. MP.6 Attend to precision. MP.7 Look for and make use of structure.	Concept(s): ● Quantitative relationships exist between the digits in place value positions of a multi-digit number. Students are able to: ● explain that a digit in one place represents 1/10 of what it would represent in the place to its left. ● explain that a digit in one place represents ten times what it would represent in the place to its right.

Key: Major Clusters | Supporting | Additional Clusters | * Benchmarked

		Learning Goal 3: 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.
• 5.NBT.A.2. 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.	MP.2 Reason abstractly and quantitatively. MP.6 Attend to precision. MP.7 Look for and make use of structure.	Concept(s): • Scientific notation and exponents Students are able to: • explain patterns in the number of zeros of the product when multiplying a whole number by powers of 10. • write powers of 10 using whole-number exponents. Learning Goal 4: Explain patterns in the number of zeros in the product when a whole number is multiplied by a power of 10; represent powers of 10 using whole-number exponents.
• 5.NBT.B.5. Fluently multiply multi-digit whole numbers using the standard algorithm. *(benchmarked)	MP.2 Reason abstractly and quantitatively. MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.	Concept(s): No new concept(s) introduced Students are able to: • multiply a whole number of up to a four digits by a whole number of up two digits using the standard algorithm with accuracy and efficiency. Learning Goal 5: Use the standard algorithm to multiply a whole number of up to a four digits by a whole number of up two digits.
• 5.NBT.B.6. 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.	MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically.	Concept(s): No new concept(s) introduced Students are able to: • divide to find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors using strategies based on place value, properties of operations, and the relationship between multiplication and division. • represent these operations with equations, rectangular arrays, and area models. • explain the calculation by referring to the model (equation, array, or area model).

Key: Major Clusters | Supporting | Additional Clusters | * Benchmarked

	MP.7 Look for and make use of structure.	Learning Goal 6: 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.
● 5.NBT.A.3. Read, write, and compare decimals to thousandths. 5.NBT.A.3a. 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. Compare two decimals to thousandths based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.	MP.2 Reason abstractly and quantitatively. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure.	Concept(s): ● Multiple representations of whole numbers Students are able to: ● read and write decimals to thousandths using base-ten numerals. ● read and write decimals to thousandths using number names. ● read and write decimals to thousandths using expanded form. ● compare two decimals to thousandths using >, =, and < symbols. ● compare decimals when each is presented in a different form (base-ten numeral, number name, and expanded form). Learning Goal 7: Compare two decimals to thousandths using >, =, and < for numbers presented as base ten numerals, number names, and/or in expanded form.
● 5.NBT.A.4. Use place value understanding to round decimals to any place.	MP.2 Reason abstractly and quantitatively. MP.6 Attend to precision. MP.7 Look for and make use of structure.	Concept(s): No new concept(s) introduced Students are able to: ● round decimals to any place value. Learning Goal 8: Round decimals to any place value.

District/School Formative Assessment Plan	District/School Summative Assessment Plan
● Teacher-Created Assessments ● Homework ● Classwork	● Chapter Tests ● Unit Tests ● EdConnect Assessments

Key: Major Clusters | Supporting | Additional Clusters | * Benchmarked

- UDL's
- whiteboard activities
- IXL
- Problem of the Day
- Exit Ticket

Focus Mathematical Concepts

Vocabulary		Instruction and Pacing	
order of operations	standard form	Pretest	1 day
numerical expression	expanded form	Place Value and Place Value Relationships	2 weeks
digits	word form	Multiplying Whole Numbers and Decimals	2 weeks
value	equivalent decimals	Order or Operations/Variables and Expressions	2 weeks
rounding	partial product	Rounding and Comparing Decimals	1 week
		Dividing Whole Numbers and Decimals	2 weeks

ENDURING UNDERSTANDING	ESSENTIAL QUESTIONS
• There is an agreed upon order for which operations in a numerical expression are performed. • Some mathematical phrases can be represented using a numerical expression. • In a multi-digit number, a digit in the ones place represents ten times what it would represent immediately to its right and one tenth what it would represent in the place immediately to its left. • Patterns can be used to mentally multiply and divide decimals by 10, 100, 1000. • Place value can be used to compare and order whole numbers and decimals. • A number line can be used to round decimals. • The properties of multiplication can be used to simplify computation and to verify mental math and paper and pencil algorithms. • The standard division algorithm breaks apart the calculation into simpler calculations using basic facts, place value, the relationship between multiplication and division, and estimation.	• How can you evaluate a numerical expression involving more than one operation? • How can you translate words into expressions? • How do the digits in a multi-digit number relate to each other? • What is the rule for dividing decimals by 10, 100, 1000? • What is the rule for multiplying decimals by 10, 100, 1000? • How can you represent a decimal in a place value chart? • How can you compare decimals? • How can you round decimals? • How can you multiply multi-digit numbers? • How can you divide multi-digit numbers?

Differentiation and Accommodations	District/School Primary and Supplementary Resources
• Provide graphic organizers • Provide additional examples and opportunities for additional problems for repetition • Provide tutoring opportunities • Provide retesting opportunities after remediation (up to teacher and district discretion)	• Go Math!! • IXL • Teacher created materials

Key: Major Clusters | Supporting | Additional Clusters | * Benchmarked

• Teach for mastery not test • Teaching concepts in different modalities • Adjust pace and homework assignments	

Instructional Strategies
Fairfield Township School recognizes the importance of the varying methodologies that may be successfully employed by teachers within the classroom and, as a result, identifies a wide variety of possible instructional strategies that may be used effectively to support student achievement. These may include, but not be limited to, strategies that fall into categories identified by the Framework for Teaching by Charlotte Danielson: • Communicating with students • Using questioning and discussion techniques • Engaging students in learning • Using assessment in instruction • Demonstrating Flexibility and Responsiveness

Common Misconceptions	Proper Conceptions
Students may believe the order in which a problem with mixed operations is written is the order to solve the problem.	There is an agreed upon order for which operations in a numerical expression are performed.
As you move to the left of the decimal point, the number increases in value.	In a multi-digit number, a digit in the ones place represents ten times what it would represent immediately to its right and one tenth what it would represent in the place immediately to its left.

Performance Task

Bob sells hot dogs for $2.75 at the local baseball games. During the first game of the season, Bob sold 10 hot dogs. At the second game, he sold 100 hot dogs. At the third game, he sold 1,000 hot dogs.

- How much money did Bob earn during the first game?
- How much money did Bob earn during the second game?
- How much money did Bob earn during the third game?
- Explain the pattern you notice in Bob's earnings.
- If Bob pays $1.25 for each hot dog, how much profit did he make at each game?

Rubric: 1 point for each correct bullet

Unit 2 Grade 5 – Geometry and Fractions		
Content Standards	**Suggested Standards for Mathematical Practice**	**Transfer**

Key: Major Clusters | Supporting | Additional Clusters | * Benchmarked

• 5.MD.C.3. Recognize volume as an attribute of solid figures and understand concepts of volume measurement. 5.MD.C.5a. A cube with side length 1 unit, called a "unit cube," is said to have "one cubic unit" of volume, and can be used to measure volume. 5.MD.C.5b. A solid figure which can be packed without gaps or overlaps using *n* unit cubes is said to have a volume of *n* cubic units. • 5.MD.C.4. Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and non-standard units.	MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure.	Concept(s): • Volume is the amount of space inside a solid (3-dimensional) figure. • Cubes with side length of 1 unit, called "a unit cube," is said to have "one cubic unit" of volume, and can be used to measure volume. • Solid figures which can be packed without gaps or overlaps using *n* unit cubes is said to have a volume of *n* cubic units. • Volume of a solid can be determined using unit cubes of other dimensions. Students are able to: • count unit cubes in order to measure the volume of a solid. • use unit cubes of centimeters, inches, and/or other units to measure volume. Learning Goal 1: Measure volume by counting the total number cubic units required to fill a figure without gaps or overlaps.
• 5.MD.C.5. Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume. 5.MD.C.5a. Find the volume of a right rectangular prism with whole-number side lengths by packing it with unit cubes, and show that the volume is the same as would be found by multiplying the edge lengths, equivalently by multiplying the height by the area of the base. Represent threefold whole-number products as volumes, e.g., to represent the associative property of multiplication. 5.MD.C.5b. Apply the formulas $V = l \times w \times h$ and $V = B \times h$ for rectangular	MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.	Concept(s): • Volume is additive: volumes of composite solids can be determined by adding the volumes of each solid. Students are able to: • pack right rectangular prisms with cubes to find volume and multiply side lengths of the right rectangular prism to find volume, showing that they are the same. • pack right rectangular prisms with cubes to find volume and multiply height by the area of the base, showing that they are the same. • explain how both volume formulas relate to counting the cubes in one layer and multiplying that value by the number of layers (height). • write the volume of an object as the product of three whole numbers. • solve real-world and mathematical problems using the formulas $V = l \times w \times h$ and $V = B \times h$. • find the volume of a composite solid composed of two right rectangular prisms. Learning Goal 2: Show that the volume of a right rectangular prism found by counting all the unit cubes is the same as the formulas $V = l \times w \times h$

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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. 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.		or $V = B \times h$. Learning Goal 3: Apply formulas to solve real world and mathematical problems involving volumes of right rectangular prisms that have whole number edge lengths. Learning Goal 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.
● 5.NBT.B.5. Fluently multiply multi-digit whole numbers using the standard algorithm. *(benchmarked)	MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.7 Look for and make use of structure.	Concept(s): No new concept(s) introduced Students are able to: ● multiply multi-digit whole numbers with accuracy and efficiency. Learning Goal 5: Fluently multiply multi-digit whole numbers with accuracy and efficiency.
● 5.NF.A.1. 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. *For example, 2/3 + 5/4 = 8/12 + 15/12 = 23/1 (in general, a/b + c/d = (ad + bc)/bd).*	MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically.	Concept(s): ● Equivalent fractions can be used to add and subtract fractions. Students are able to: ● produce an equivalent sum (or difference) of fractions with like denominators from the original sum (or difference) of fractions that has unlike denominators. ● add and subtract fractions with unlike denominators by replacing given fractions with equivalent fractions. Learning Goal 6: Add and subtract fractions (including mixed numbers) with unlike denominators by replacing the given fractions with equivalent

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	MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.	fractions having like denominators
● 5.NF.A.2. 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. *example, recognize an incorrect result 2/5 + 1/2 = 3/7, by observing that 3/7 < 1/2.*	MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure.	Concept(s): No new concept(s) introduced Students are able to: ● add and subtract fractions, including mixed numbers, with unlike denominators to solve word problems. ● represent calculations and solutions with visual fraction models and equations ● estimate answers using benchmark fractions and explain whether the answer is reasonable. ● estimate answers by reasoning about the size of the fractions and explain whether the answer is reasonable. Learning Goal 7: 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.
● 5.NF.B.3. Interpret a fraction as division of the numerator by the denominator ($a/b = a \div b$). 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. *example, interpret 3/4 as the result of dividing 3 by 4, noting that 3/4 multiplied by 4 equals 3, and that when 3 wholes are shared equally among 4 people each person has a share of size 3/4. If 9 people want to share a 50-pound sack of rice equally by*	MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of	Concept(s): ● Fractions represent division. Students are able to: ● represent a fraction as a division statement ($a/b = a \div b$). ● divide whole numbers in order to solve real world problems, representing the quotient as a fraction or a mixed number. ● represent word problems involving division of whole numbers using visual fraction models and equations. Learning Goal 8: 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.

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weight, how many pounds of rice should each person get? Between what two whole numbers does your answer lie?	structure.	
● 5.NF.B.4. Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction. 5.NF.B.4a. Interpret the product $(a/b) \times q$ as a parts of a partition of q into b equal parts; equivalently, as the result of a sequence of operations $a \times q \div b$. *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. 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.	MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure.	Concept(s): No new concept(s) introduced Students are able to: ● for whole number or fraction q, represent $(a/b) \times q$ as a parts of a partition of q into b equal parts [e.g. using a visual fraction model, (3/4) x 5 can be represented by 3 parts, after partitioning 5 objects into 4 equal parts]. ● for whole number or fraction q, represent $(a/b) \times q$ *as* $a \times q \div b$ [e.g. showing that (2/5) x 3 is equivalent to (2 x 3) ÷ 5]. ● from a story context, interpret $(a/b) \times q$ as a parts of a partition of q into b equal parts. ● tile a rectangle having fractional side lengths using unit squares of the appropriate unit fraction [e.g. given a 3 ¼ inch x 7 ¾ inch rectangle, tile the rectangle using ¼ inch tiles]. ● show that the area found by tiling with unit fraction tiles is the same as would be found by multiplying the side lengths. Learning Goal 9: 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). Learning Goal 10: 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.

District/School Formative Assessment Plan	District/School Summative Assessment Plan
● Teacher-Created Assessments ● Homework ● Classwork ● UDL's ● whiteboard activities	● Chapter Tests ● Unit Tests ● EdConnect Assessments

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• IXL • Problem of the Day • Exit Ticket	

Focus Mathematical Concepts

Vocabulary		Instruction and Pacing	
Volume	area	Pretest	1 day
cubic unit	rectangle	Cubic Units	1 week
cube		Volume with Cubes	1 week
prism		Volume Formula	1 week
solid figure		Volumes- layers of cubes	1 week
3-d object		Volume of Composite Figures	1 week
Fraction			
denominator			
		Add/Subtract fractions	2 weeks
		Add/Subtract Mixed numbers	1 week
		Area of rectangles	1 week

ENDURING UNDERSTANDING	Essential Questions
• Volume is a measure of the amount of space inside a solid figure. • Volume can be measured by counting the number of cubic units needed to fill a three-dimensional object. • The volume of some objects can be found by breaking apart the object into other objects for which the volume of each can be found. • Some problems can be solved by using objects to act out the action in the problem. • Some problems can be solved by reasoning about conditions in the problem. • Interpret addition of fractions • Interpret subtractions of fractions • Add mix numbers with unlike denominators • Subtract mixed numbers with unlike denominators • Solve word problems involving addition/subtraction of fractions with unlike denominators • Multiply a fraction by a whole number • Solve word problems involving multiplication of a fraction by a whole number	• How can you use models to find the volume of a rectangular prism? • How can you find the volume of a rectangular prism? • How can you use formulas to solve a problem? • How can you find the volume of irregular solids? • How can you use objects to solve problems • What are the steps for adding fractions with unlike denominators? • What are the steps for subtracting fractions with unlike denominators? • How do you add mixed numbers with unlike denominators? • What are the steps to solve word problems involving adding and subtraction of fractions with unlike denominators? • How do you multiply a fraction with a whole number?

Differentiation and Accommodations	District/School Primary and Supplementary Resources
● Provide graphic organizers ● Provide additional examples and opportunities for additional problems for repetition ● Provide tutoring opportunities ● Provide retesting opportunities after remediation (up to teacher and district discretion) ● Teach for mastery not test ● Teaching concepts in different modalities ● Adjust pace and homework assignments	● Go Math!! ● IXL ● Teacher created materials

Instructional Strategies

Fairfield Township School recognizes the importance of the varying methodologies that may be successfully employed by teachers within the classroom and, as a result, identifies a wide variety of possible instructional strategies that may be used effectively to support student achievement. These may include, but not be limited to, strategies that fall into categories identified by the Framework for Teaching by Charlotte Danielson:

- Communicating with students
- Using questioning and discussion techniques
- Engaging students in learning
- Using assessment in instruction
- Demonstrating Flexibility and Responsiveness

Common Misconceptions	Proper Conceptions
Students are unsure as to which units to use to measure volume because they are not sure what they are measuring	Volume is a measure of the amount of space inside a solid figure.
Students may confuse the need to find volume with area.	Volume is a measure of the amount of space inside a solid figure. Volume can be measured by counting the number of cubic units needed to fill a three-dimensional object.

Performance Task

Erik was given 2 rectangular prisms. He was told to find the volume of each one. The first rectangular prism measured 5 cm tall, 2 cm long, and 2 cm wide. The second rectangular prism measured 4 cm long, 3 cm wide, and 2 cm high.

1) **Find the volume of each prism. Show your work.**
2) **Which prism could hold more centimeter cubes and by how many more?**
3) **Show 3 different sized rectangular prisms that would give you the same volume as the second one from above.**

Rubric

One point for each correct bullet.

Key: Major Clusters | Supporting | Additional Clusters | * Benchmarked

Unit 3 Grade 5 – Fractions & decimals		
Content Standards	**Suggested Standards for Mathematical Practice**	**Transfer**
● 5.NF.B.4. Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction. 5.NF.B.4b. 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.	MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.	Concept(s): No new concept(s) introduced Students are able to: ● multiply fractional side lengths to find areas of rectangles. ● represent fraction products as rectangular areas. ● multiply a fraction by a whole number. ● multiply a fraction by a fraction, in general, if q is a fraction c/d, then $(a/b) \times (c/d) = a(1/b) \times c(1/d) = ac \times (1/b)(1/d) = ac(1/bd) = ac/bd.$ Learning Goal 1: Multiply fractions by whole numbers and fractions by fractions, drawing visual models to represent products, showing $(a/b) \times (c/d) = ab(1/bd)$, and creating story contexts.
● 5.NF.B.5. Interpret multiplication as scaling (resizing), by: 5.NF.B.5a. Comparing 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. 5.NF.B.5b. Explaining 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	MP.2 Reason abstractly and quantitatively. MP.4 Model with mathematics. MP.6 Attend to precision. MP.7 Look for and make use of structure.	Concept(s): ● Multiplication as resizing (scaling) Students are able to: ● compare the size of a product to the size of one of its factors, considering the size of the other factor (at least one factor is a fraction). ● explain why multiplying a given number by a fraction greater than 1 results in a product greater than the given number. ● explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number. ● explain that multiplying a given number by a fraction equivalent to 1 does not change the product. Learning Goal 2: Explain how a product is related to the magnitude of the factors,

Key: Major Clusters | Supporting | Additional Clusters | * Benchmarked

less than 1 results in a product smaller than the given number; and relating the principle of fraction equivalence $a/b = (n\times a)/(n\times b)$ to the effect of multiplying a/b by 1.		including cases in which one factor is a fraction greater than 1 and cases in which one factor is a fraction less than 1.
● 5.NF.B.6. Solve real world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem.	MP.4 Model with mathematics. MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.	Concept(s): No new concept(s) introduced Students are able to: ● multiply fractions and mixed numbers in order to solve real world problems. ● represent the solution to these real world problems with visual fraction models and equations. Learning Goal 3: Solve real-world problems involving multiplication of fractions (including mixed numbers), using visual fraction models or equations to represent the problem.
● 5.NF.B.7. Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions. *(benchmarked) 5.NF.B.7a. 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.*	MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision.	Concept(s): No new concept(s) introduced Students are able to: ● use a story context to interpret division of a unit fraction by a whole number. ● divide of a unit fraction by a whole number and represent with visual fraction models. ● use a story context to interpret division of a whole number by a unit fraction. ● divide of a whole number by a unit fraction and represent with visual fraction models. ● divide unit fractions by whole numbers to solve real-world problems, using visual fraction models and equations to represent the problem. ● divide whole numbers by unit fractions to solve real-world problems,

Key: Major Clusters | Supporting | Additional Clusters | * Benchmarked

5.NF.B.7b. 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.* 5.NF.B.7c. 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?*	MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.	using visual fraction models and equations to represent the problem. Learning Goal 4: Divide a unit fraction by a non-zero whole number and interpret by creating a story context or visual fraction model. Learning Goal 5: Divide a whole number by a unit fraction and interpret by creating a story context or visual fraction model. Learning Goal 6: Solve real-world problems involving division of unit fractions by whole numbers or whole numbers by unit fractions.
● 5.NBT.A.2. 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.	MP.2 Reason abstractly and quantitatively. MP.6 Attend to precision. MP.7 Look for and make use of structure.	Concept(s): No new concept(s) introduced Students are able to: ● explain patterns in the placement of the decimal point when multiplying or dividing a decimal by powers of 10. ● write powers of 10 using whole-number exponents. Learning Goal 7: 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.
● 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	MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments	Concept(s): No new concept(s) introduced Students are able to: ● add and subtract decimals to hundredths using concrete models and

the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. *(benchmarked)	and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.7 Look for and make use of structure.	drawings. ● multiply and divide decimals to hundredths using concrete models and drawings. ● add, subtract, multiply, and divide decimals to hundredths using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. ● relate the strategy to the written method and explain the reasoning used. Learning Goal 8: 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.
● 5.MD.A.1. Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problems.	MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.5 Use appropriate tools strategically. MP.6 Attend to precision.	Concept(s): Measurement units can be converted within a given measurement system. Students are able to: ● convert from one measurement unit to another within a given measurement system (e.g., convert 5 cm to 0.05 m, convert minutes to hours). ● solve multi-step, real world problems that require conversions. Learning Goal 9: Convert standard measurement units within the same system (e.g., centimeters to meters) in order to solve multi-step problems.

District/School Formative Assessment Plan	District/School Summative Assessment Plan
● Teacher-Created Assessments ● Homework ● Classwork ● UDL's ● whiteboard activities ● IXL ● Problem of the Day ● Exit Ticket	● Chapter Tests ● Unit Tests ● EdConnect Assessments

Key: Major Clusters | Supporting | Additional Clusters | * Benchmarked

Focus Mathematical Concepts

Vocabulary	Instruction and Pacing	
mixed number numerator denominator power/exponent decimal place value converting measurements	Pretest	1 day
	Multiplying fractions	2 weeks
	Dividing fractions	1 week
	Powers of 10 and their Patterns with decimal points	1 week
	Adding and subtracting decimals	1 week
	Multiplying decimals	1 week
	Dividing decimals	1 week
	Converting between system measurements	2 weeks

ENDURING UNDERSTANDING	ESSENTIAL QUESTIONS
• The product of a whole number and a fraction can be interpreted I different ways. On interpretation is repeated addition. Multiplying a whole number by a fraction involves division as well as multiplication. The product is a fraction of the whole number. • The relative size of the factors can be used to determine the relative size of the product. • Rounding and compatible numbers can be used to estimate the product of fractions or mixed numbers. • A unit square can be used to show the area meaning of fraction multiplication. When you multiply two fractions that are both less than 1, the product is smaller than either fraction. To multiply fractions, write the product of the numerators over the product of the denominators. • One way to find the product of mixed numbers is to change the calculation to an equivalent one involving improper fractions. • Some problems can be solved by first finding and solving a sub-problem(s) and then using that answer(s) to solve the original problem. • A fraction describes the division of a whole into equal parts, and it can be interpreted in more than one way depending on the whole to be divided. • One way to find the quotient of a whole number divided by a fraction is to multiply the whole number by the reciprocal of the fraction. • The inverse relationship between multiplication and division can be used to divide with fractions. • Information in a problem can often be shown with a diagram and used to solve the problem. • Some problems can be solved by writing and completing a number sentence or equation	• How can you multiply fractions and whole numbers? • How does multiplying by a fraction change the second factor? • How can you use compatible numbers to estimate with fractions? • How can you multiply fractions? • How can you multiply mixed numbers? • How can you solve multiple step problems? • How are fractions related to division? • How do you divide a whole number by a fraction? • How can you divide a fraction by a whole number? • Why must you line up the decimal point when adding or subtracting decimals, but not while multiplying or dividing decimals?

Key: Major Clusters | Supporting | Additional Clusters | * Benchmarked

● You must follow certain procedures when calculating operations with decimals	

Differentiation and Accommodations	District/School Primary and Supplementary Resources
● Provide graphic organizers ● Provide additional examples and opportunities for additional problems for repetition ● Provide tutoring opportunities ● Provide retesting opportunities after remediation (up to teacher and district discretion) ● Teach for mastery not test ● Teaching concepts in different modalities ● Adjust pace and homework assignments	● Go Math!! ● IXL ● Teacher created materials

Instructional Strategies

Fairfield Township School recognizes the importance of the varying methodologies that may be successfully employed by teachers within the classroom and, as a result, identifies a wide variety of possible instructional strategies that may be used effectively to support student achievement. These may include, but not be limited to, strategies that fall into categories identified by the Framework for Teaching by Charlotte Danielson:

- Communicating with students
- Using questioning and discussion techniques
- Engaging students in learning
- Using assessment in instruction
- Demonstrating Flexibility and Responsiveness

Common Misconceptions	Proper Conceptions
Students may believe that multiplication always results in a larger number.	Using models when multiplying with fractions will enable students to see that the results will be smaller.
Students may believe that division always results in a smaller number.	Using models when dividing with fractions will enable students to see that the results will be larger.

Performance Task

Andy has 3 cats that love to use a cat door to go in and out of the house. Yesterday, the cat door was used 100 times. Mittens used the door ¼ of the time. Puffball used the door 3/10 of the time.

1) How many times did Mittens use the cat door? Show your work
2) How many times did Puffball use the cat door? Show your work
3) How many times did Andy's 3rd cat, Mooshi, use the door? Show your work and explain how you found that out.

Rubric

1 point for each correct bullet

Key: Major Clusters | Supporting | Additional Clusters | * Benchmarked

Unit 4 Grade 5 – Coordinate geometry and classifying figures		
Content & Practice Standards	**Suggested Standards for Mathematical Practice**	**Transfer**
● 5.G.A.1. Use a pair of perpendicular number lines, called axes, to define a coordinate system, with	MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and	Concept(s): ● Coordinate plane as perpendicular number lines. ● Perpendicular number lines (axes) define a coordinate system.

Key: Major Clusters | Supporting | Additional Clusters | * Benchmarked

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. 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.	quantitatively. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure.	● Intersection of the lines (origin) coincides with the 0 on each number line. ● Given points in the plane is located using an ordered pair of numbers (coordinates). ● First numbers in an ordered pair indicates how far to travel from the origin in the direction of the x-axis. ● Second numbers in an ordered pair indicate how far to travel in the direction of the y-axis. Students are able to: ● graph points defined by whole number coordinates in the first quadrant of the coordinate plane in order to represent real world and mathematical problems. ● interpret coordinates in context. Learning Goal 1: 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.
● 5.OA.A.3. 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*	MP.2 Reason abstractly and quantitatively. MP.7 Look for and make use of structure.	Concept(s): No new concept(s) introduced Students are able to: ● use two rules to create two numerical patterns. ● compare corresponding terms (e.g. compare the first terms in each list, compare the second terms in each list, etc). ● identify the relationship between corresponding terms and write ordered pairs. ● graph the ordered pairs. Learning Goal 2: Generate two numerical patterns from two given rules, identify the relationship between corresponding terms, create ordered pairs and

Key: Major Clusters | Supporting | Additional Clusters | * Benchmarked

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.		graph the ordered pairs.
● 5.G.B.3. Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category. *example, all rectangles have four right angles and squares are rectangles, so all squares have four right angles.* ● 5.G.B.4. Classify two-dimensional figures in a hierarchy based on properties.	MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure.	Concept(s): ● Attributes belonging to a category of two-dimensional figures also belong to *all* subcategories of that category. Students are able to: ● classify two-dimensional figures (triangles, quadrilaterals) based on shared attributes (e.g. parallel sides, number of sides, angle size, side length, etc.). ● arrange the categories/subcategories of figures (e.g. squares, rectangles, trapezoids, etc) in a hierarchy based on attributes. ● identify attributes of a two-dimensional shape based on attributes of the categories to which it belongs. Learning Goal 3: Classify two- dimensional figures in a hierarchy based on properties.
● 5.MD.B.2. 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. *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.*	MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure.	Concept(s): No new concept(s) introduced Students are able to: ● use measurement information to create a line plot. ● using measurement information presented in line plots, add, subtract, multiply and divide fractions in order to solve problems. Learning Goal 4: Make a line plot to display a data set in measurements in fractions of a unit (1/2, 1/4, 1/8) and use it to solve problems involving the four operations on fractions with unlike denominators.
● 5.NBT.B.5. Fluently multiply multi-digit whole	MP.2 Reason abstractly and	Concept(s): No new concept(s) introduced

numbers using the standard algorithm. *(benchmarked)	quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.7 Look for and make use of structure.	Students are able to: ● multiply multi-digit whole numbers with accuracy and efficiency. Learning Goal 5: Fluently multiply multi-digit whole numbers with accuracy and efficiency.
● 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 relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. *(benchmarked)	MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.7 Look for and make use of structure.	Concept(s): No new concept(s) introduced Students are able to: ● add and subtract decimals to hundredths using concrete models and drawings. ● multiply and divide decimals to hundredths using concrete models and drawings. ● add, subtract, multiply, and divide decimals to hundredths using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. ● relate the strategy to the written method and explain the reasoning used. Learning Goal 6: 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.
● 5.NF.B.7. Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions.*(benchmarked) 5.NF.B.7c. Solve real world problems involving division of unit fractions by non-zero whole numbers and division of whole	MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools	Concept(s): No new concept(s) introduced Students are able to: ● use a story context to interpret division of a unit fraction by a whole number. ● use a story context to interpret division of a whole number by a unit fraction. ● divide unit fractions by whole numbers to solve real world problems, using visual fraction models and equations to represent the problem. ● divide whole numbers by unit fractions to solve real world problems, using visual fraction models and equations to represent the problem.

Key: Major Clusters | Supporting | Additional Clusters | * Benchmarked

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?*	strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.	Learning Goal 7: Solve real world problems involving division of unit fractions by whole numbers or whole numbers by unit fractions.

District/School Formative Assessment Plan	District/School Summative Assessment Plan
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Focus Mathematical Concepts

Vocabulary	Instruction and Pacing	
Coordinate grid Ordered pair Plane figure X and Y axis Origin Polygon Quadrilateral Line plot outlier	Pretest	1 day
	Coordinate plane	2 weeks
	2-d figures	2 weeks
	Line plots	1 week
	Review multiplying multi-digit numbers	1 week
	Review decimal operations	1 week
	Review dividing fractions	1 week

ENDURING UNDERSTANDING	ESSENTIAL QUESTIONS
● The coordinate system is a scheme that uses two perpendicular lines intersecting at 0. ● Plane shapes have many properties that make them differ from one another. ● A line plot organizes data on a number line and is useful for showing	● How do you name and graph points on a coordinate grid? ● How can you find a pattern rule? ● How do you classify polygons? ● How are quadrilaterals related to each other?

Key: Major Clusters | Supporting | Additional Clusters | * Benchmarked

visually how a set of data is distributed.	• How can you organize data in a line plot?

Differentiation and Accommodations	District/School Primary and Supplementary Resources
• Provide graphic organizers • Provide additional examples and opportunities for additional problems for repetition • Provide tutoring opportunities • Provide retesting opportunities after remediation (up to teacher and district discretion) • Teach for mastery not test • Teaching concepts in different modalities • Adjust pace and homework assignments	• Go Math!! • IXL • Teacher created materials

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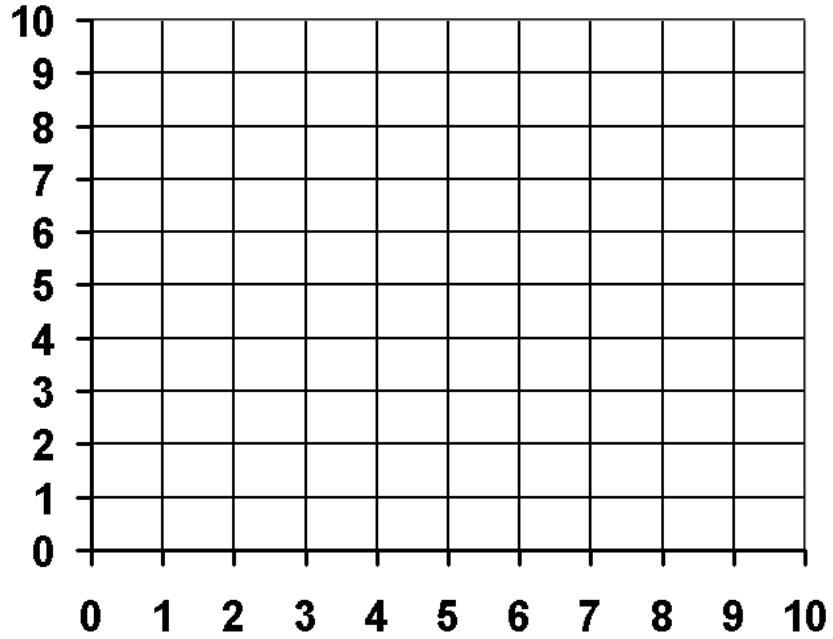
Common Misconceptions	Proper Conceptions
Students reverse the points when plotting them on a coordinate plane. They count up first on the y-axis and then count over on the x-axis.	The location of every point in the plane has a specific place.
Students might compute the sum or difference of decimals by lining up the right-hand digits as they would whole number.	Decimals must be lined up to line up the place values when computing the sum or difference of decimals.
Students think that when describing geometric shapes and placing them in subcategories, the last category is the only classification that can be used.	Geometric shapes can sometimes be placed in more than one category.

Performance Task

Jimmy is making a sign for the family farm. He reproduces the pine tree symbol by graphing ordered pairs onto a larger grid. He locates this set of points on a coordinate grid and connects them.

(1, 2), (4, 2), (4, 1), (6, 1), (6, 2), (9, 2), (5, 10)



- graph the given points on the coordinate grid.
- Which ordered pairs mark the spot where the tree would touch the ground?
- Which ordered pair marks the top of the tree?

Rubric

1 point for each correct bullet