

GRADES 3-5 MATH CURRICULUM

Middle Township Public Schools 216 S. Main Street Cape May Court House, NJ 08210

Born: April 2024

Grade 3

Unit 1 Overview

Content Area: Mathematics

Unit Title: Understanding of Properties of Multiplication and Division

Grade Level: 3rd

Pacing: September- November (45 days)

Unit Summary:

• Students develop an understanding of the meanings of multiplication and division of whole numbers through activities and problems involving equal-sized groups, arrays, and area models. Students will use sophisticated strategies to solve various multiplication and division problems that involve single-digit factors. Students will identify and learn the relationship between multiplication and division by being able to compare the learned solution strategies.

Standard(s) & Math Practice(s)	Learning Targets (objective) - Students will	Resources & Materials
3.OA.A.1	Interpret products of whole numbers, e.g., interpret 5 x 7 as the total number of objects in 5 groups of 7 objects each. For example, describe and/or represent a context in which a total number of objects can be expressed as 5 x 7.	Everyday Mathematics 4, Volumes 1 and 2, Base-Ten Blocks Math Manipulatives Multiplication Charts Boddle Learning Prodigy Engage NY
3.OA.A.2	Interpret whole-number quotients of whole numbers, e.g., interpret $56 \div 8$ as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56	Everyday Mathematics 4, Volumes 1 and 2, Base-Ten Blocks

	objects are partitioned into equal shares of 8 objects each. For example, describe and/or represent a context in which a number of shares or a number of groups can be expressed as $56 \div 8$.	Math Manipulatives Multiplication Charts Boddle Learning Prodigy Engage NY
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3.OA.A.3	Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.	Everyday Mathematics 4, Volumes 1 and 2, Base-Ten Blocks Math Manipulatives Multiplication Charts Boddle Learning Prodigy Engage NY
3.OA.A.4	Determine the unknown whole number in a multiplication or division equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations $8 \times ? = 48, 5 = ? \div$ 3, $6 \times 6 = ?$.	Everyday Mathematics 4, Volumes 1 and 2,
		Base-Ten Blocks
		Math Manipulatives
		Multiplication Charts
		Boddle Learning
		Prodigy
		Engage NY
3.OA.B.5	Apply properties of operations as strategies to multiply and divide. Examples: If 6 x 4 = 24 is known, then 4	Everyday Mathematics 4, Volumes 1 and 2,
	x 6 = 24 is also known. (Commutative property of multiplication.) $3 \times 5 \times 2$ can be found by $3 \times 5 = 15$, then $15 \times 2 = 30$, or by $5 \times 2 = 10$, then $10 \times 3 = 30$. (Associative property of multiplication.) Knowing that $8 \times 5 = 40$ and $8 \times 2 = 16$, one can find 8×7 as $8 \times (5 + 2) = (8 \times 5)$ + $(8 \times 2) = 40 + 16 = 56$. (Distributive property.) {Clarification: Students need not use formal terms for these properties).	Base-Ten Blocks
		Math Manipulatives
		Multiplication Charts
		Prodigy
		Engage NY

3.OA.B.6	Understand division as an unknown- factor problem. For example, find 32 ÷ 8 by finding the number that makes 32 when multiplied by 8.	Everyday Mathematics 4, Volumes 1 and 2, Base-Ten Blocks Math Manipulatives Multiplication Charts Boddle Learning Prodigy Engage NY
3.OA.C.7	With accuracy and efficiency, multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 \div 5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.	Everyday Mathematics 4, Volumes 1 and 2, Base-Ten Blocks Math Manipulatives Multiplication Charts Boddle Learning Prodigy Engage NY
3.OA.D.8	Solve two-step word problems, including problems involving money, using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding. (Clarification: This standard is limited to problems posed with whole numbers and having whole number answers; students should know how to perform operations in the conventional order when there are no parentheses to specify a particular order) (Order of Operations)	Everyday Mathematics 4, Volumes 1 and 2, Base-Ten Blocks Math Manipulatives Multiplication Charts Boddle Learning Prodigy Engage NY
3.OA.D.9	Identify arithmetic patterns (including patterns in the addition table or multiplication table) and explain them using properties of operations. For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two	Everyday Mathematics 4, Volumes 1 and 2, Base-Ten Blocks Math Manipulatives Multiplication Charts

	equal addends.	Boddle Learning	
		Prodigy	
		Engage NY	
	Standards for Mathematical Prac	tices	
MP1 Make sense of	MP1 Make sense of problems and persevere in solving them.		
MP2 Reason abstractly and quantitatively.			
MP4 Model with mathematics.			
MP5 Use appropriate tools strategically.			
MP6 Attend to precision.			
MP8 Look for and express regularity in repeated reasoning.			

Assessments	
Formative	 Entry/ Exit Slips Slate Assessments Progress Monitoring Classwork/ Homework Guided Practice Open Response Assessments Math Boxes
Summative	QuizzesUnit TestsDiagnostic Assessments
Benchmark	 Beginning, Mid, End of Year Assessments STAR Assessments
Alternative	Teacher Observations

Accommodations and Modifications	
Special Education	 Follow 504/IEP accommodations Step by step examples Visual demonstration of skill or activity Allow for flexible grouping Student centered activities

	 Learning Stations Small group & large group discussions Problem solving situations Restate, reword, clarify directions Provide Educational "breaks" as necessary Utilize visual and audio cues
English Language Learners	 Step by step examples Visual demonstration of skill or activity Allow for flexible grouping Student centered activities Learning Stations Small group & large group discussions Problem solving situations Utilize visual and audio cues Highlight, define, or demonstrate important vocabulary Restate, reword, clarify directions
Students At-Risk of School Failure	 Step by step examples Visual demonstration of skill or activity Allow for flexible grouping Student centered activities Learning Stations Small group & large group discussions Problem solving situations Utilize visual and audio cues Highlight, define, or demonstrate important vocabulary Restate, reword, clarify directions Chunking content into small segments Shorten or reduce assignment to focus on one specific skill
Gifted and Talented	 Student Choice Student centered activities Enhance skill or activity based on Individual Student Need Allow for flexible grouping Problem solving situations
Students with 504 Plans	 Follow 504/IEP accommodations Step by step examples Visual demonstration of skill or activity Allow for flexible grouping Student centered activities Learning Stations Small group & large group discussions Problem solving situations Restate, reword, clarify directions Provide Educational "breaks" as necessary Utilize visual and audio cues

- **SL.PE.3.1.** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher led) with diverse partners on grade 3 topics and texts, building on others' ideas and expressing their own clearly.
- **SL.ES.3.3.** Ask and answer questions about information from a speaker, offering appropriate elaboration and detail.
- L.KL.3.1. Use knowledge of language and its conventions when writing, speaking, reading, or listening.
- **L.VL.3.2.** Determine or clarify the meaning of unknown and multiplemeaning academic and domain-specific words and phrases based on grade 3 reading and content, choosing flexibly from a range of strategies.

Climate Change Integration

• **3.OA.A.3:** Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.

**Climate Change Example: Students may solve multiplication and division word problems involving measurement quantities related to glacier retreat.

• **3.OA.D.8**: Solve two-step word problems, including problems involving money, using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding. ****Climate Change Example:** Students may use the four operations to solve two-

**<u>Climate Change Example</u>: Students may use the four operations to solve twostep word problems related to glacier retreat.

Integration of Technology

- **8.1.2.CS.1**: Select and operate computing devices that perform a variety of tasks accurately and quickly based on user needs and preferences.
- **8.1.5.IC.1**: Identify computing technologies that have impacted how individuals live and work and describe the factors that influenced the changes.
- **9.4.5.TL.1**: Compare the common uses of at least two different digital tools and identify the advantages and disadvantages of using each.
- **9.4.5.DC.4**: Model safe, legal, and ethical behavior when using online or offline technology
- **9.4.5.CT.1**: Identify and gather relevant data that will aid in the problem-solving process
- **9.4.5.CT.3**: Describe how digital tools and technology may be used to solve problems
- **9.4.5.CT.4**: Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and global

Career Education- NJSLS 9

- **9.2.5.CAP.1**: Evaluate personal likes and dislikes and identify careers that might be suited to personal likes.
- **9.2.5.**CAP.2: Identify how you might like to earn an income.

Unit 2 Overview

Content Area: Numbers and Operations in Base Ten

Unit Title: Numbers and Operations in Base Ten

Grade Level:

3rd

Pacing: November-December (15 days)

Unit Summary:

• Students will develop an understanding of rounding whole numbers to the nearest 10 or 100. Using strategies based on place value and properties of operations, students will fluently add and subtract to 1000 and multiply one-digit whole numbers by multiples of 10 in the range of 10-90.

Standard(s) & Math Practice(s)	Learning Targets (objective) - Students will	Resources & Materials
3.NBT.A.1	Use place value understanding to round whole numbers to the nearest 10 or 100.	Everyday Mathematics 4, Volumes 1 and 2,
		Place Value Mats
		Base-Ten Blocks
		Math Manipulatives
		Boddle Learning
		Prodigy
		Engage NY

3.NBT.A.2	With accuracy and efficiency, add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.	Everyday Mathematics 4, Volumes 1 and 2, Place Value Mats Base-Ten Blocks Math Manipulatives Boddle Learning Prodigy Engage NY
3.NBT.A.3	Multiply one-digit whole numbers by multiples of 10 in the range 10–90 (e.g., 9 x 80, 5 x 60) using strategies based on place value and properties of operations.	Everyday Mathematics 4, Volumes 1 and 2, Place Value Mats Base-Ten Blocks Math Manipulatives Boddle Learning Prodigy Engage NY
	Standards for Mathematical Prac	etice
MP1 Make sense of	problems and persevere in solving them.	
MP4 Model with mathematics.		
MP5 Use appropriate tools strategically.		
MP6 Attend to precision.		
MP8 Look for and express regularity in repeated reasoning.		

Assessments	
Formative	 Entry/ Exit Slips Slate assessments Progress Monitoring Classwork/ Homework Guided Practice Open Response Assessments Math Boxes

Summative	QuizzesUnit TestsDiagnostic Assessments
Benchmark	Beginning, Mid, End of Year AssessmentsSTAR Assessments
Alternative	Teacher Observations

Accommodations and Modifications	
Special Education	 Follow 504/IEP accommodations Step by step examples Visual demonstration of skill or activity Allow for flexible grouping Student centered activities Learning Stations Small group & large group discussions Problem solving situations Restate, reword, clarify directions Provide Educational "breaks" as necessary Utilize visual and audio cues
English Language Learners	 Step by step examples Visual demonstration of skill or activity Allow for flexible grouping Student centered activities Learning Stations Small group & large group discussions Problem solving situations Utilize visual and audio cues Highlight, define, or demonstrate important vocabulary Restate, reword, clarify directions
Students At-Risk of School Failure	 Step by step examples Visual demonstration of skill or activity Allow for flexible grouping Student centered activities Learning Stations Small group & large group discussions Problem solving situations Utilize visual and audio cues Highlight, define, or demonstrate important vocabulary Restate, reword, clarify directions Chunking content into small segments Shorten or reduce assignment to focus on one specific skill
Gifted and Talented	Student Choice

	 Student centered activities Enhance skill or activity based on Individual Student Need Allow for flexible grouping Problem solving situations
Students with 504 Plans	 Follow 504/IEP accommodations Step by step examples Visual demonstration of skill or activity Allow for flexible grouping Student centered activities Learning Stations Small group & large group discussions Problem solving situations Restate, reword, clarify directions Provide Educational "breaks" as necessary Utilize visual and audio cues

- **SL.PE.3.1.** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher led) with diverse partners on grade 3 topics and texts, building on others' ideas and expressing their own clearly.
- **SL.ES.3.3.** Ask and answer questions about information from a speaker, offering appropriate elaboration and detail.
- L.KL.3.1. Use knowledge of language and its conventions when writing, speaking, reading, or listening.
- **L.VL.3.2.** Determine or clarify the meaning of unknown and multiplemeaning academic and domain-specific words and phrases based on grade 3 reading and content, choosing flexibly from a range of strategies.

Integration of Technology

- **8.1.2.CS.1**: Select and operate computing devices that perform a variety of tasks accurately and quickly based on user needs and preferences.
- **9.4.5.TL.1**: Compare the common uses of at least two different digital tools and identify the advantages and disadvantages of using each.
- **9.4.5.DC.4**: Model safe, legal, and ethical behavior when using online or offline technology
- **9.4.5.CI.1**: Use appropriate communication technologies to collaborate with individuals with diverse perspectives about a local and/or global climate change issue and deliberate about possible solutions
- **9.4.5.CT.1**: Identify and gather relevant data that will aid in the problemsolving process
- **9.4.5.CT.3**: Describe how digital tools and technology may be used to solve problems

• **9.4.5.CT.4**: Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and global

Career Education- NJSLS 9

- **9.2.5.CAP.1**: Evaluate personal likes and dislikes and identify careers that might be suited to personal likes.
- **9.2.5.CAP.2**: Identify how you might like to earn an income.

Unit 3 Overview

Content Area: Mathematics

Unit Title: Numbers and Operations- Fractions

Grade Level:

3rd

Pacing: December – February (40 Days)

Unit Summary:

• Students develop an understanding of fractions, beginning with unit fractions. Visual fraction models, including the introductory unit fraction, are used to represent parts of a whole. Students understand that the size of a fractional part is relative to the size of the whole. Students are able to use fractions to represent numbers equal to, less than, and greater than one. They solve problems that involve comparing fractions by using visual fraction models and strategies based on noticing equal numerators or denominators.

Standard(s) & Math Practice(s)	Learning Targets (objective) - Students will	Resources & Materials
3. NF.A.1	Understand a fraction $\frac{1}{b}$ as the quantity formed by 1 part when a whole is partitioned into <i>b</i> equal parts; understand a fraction $\frac{a}{b}$ as the quantity formed by <i>a</i> parts of size $\frac{1}{b}$. For example: If a rectangle (i.e. the whole) is partitioned into 3 equal parts, each part	Everyday Mathematics 4, Volumes 1 and 2, Fraction Circles Math Manipulatives Fraction Charts

	is $\frac{1}{3}$. Two of those parts would be $\frac{2}{3}$.	Boddle Learning Prodigy Engage NY
3.NF.A.2.a	Understand a fraction as a number on the number line; represent fractions on a number line diagram. • Represent a fraction $\frac{1}{b}$ on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into <i>b</i> equal parts. Recognize that each part has size $\frac{1}{b}$ and that the endpoint of the part based at 0 locates the number $\frac{1}{b}$ on the number line. For example, partition the number line from 0 to 1 into 3 equal parts, represent $\frac{1}{3}$ on the number line and show that each part has a size $\frac{1}{3}$.	Everyday Mathematics 4, Volumes 1 and 2, Fraction Circles Math Manipulatives Fraction Charts Boddle Learning Prodigy Engage NY
3.NF.A.2.b	Understand a fraction as a number on the number line; represent fractions on a number line diagram. • Represent a fraction $\frac{a}{b}$ on a number line diagram by marking off <i>a</i> lengths $\frac{1}{b}$ from o. Recognize that the resulting interval has size $\frac{a}{b}$ and that its endpoint locates the number $\frac{a}{b}$ on the number line.	Everyday Mathematics 4, Volumes 1 and 2, Fraction Circles Math Manipulatives Fraction Charts Boddle Learning Prodigy Engage NY
3.NF.A.3.a	 Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size. Understand two fractions as equivalent (equal) if they are the same size. Understand two fractions as equivalent if they 	Everyday Mathematics 4, Volumes 1 and 2, Fraction Circles Math Manipulatives Fraction Charts

	are located at the same point on a number line.	Boddle Learning Prodigy Engage NY
3.NF.A.3.b	Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size. • Recognize and generate simple equivalent fractions by reasoning about their size, $(e.g.,\frac{1}{2}=\frac{2}{4}; \frac{4}{6}=\frac{2}{3})$. Explain why the fractions are equivalent with the support of a visual fraction model.	Everyday Mathematics 4, Volumes 1 and 2, Fraction Circles Math Manipulatives Fraction Charts Boddle Learning Prodigy Engage NY
3.NF.A.3.c	Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size. Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. Examples: Express 3 in the form $3 = \frac{3}{1}$; recognize that $\frac{6}{1} = 6$; locate $\frac{4}{4}$ and 1 at the same point on a number line diagram.	Everyday Mathematics 4, Volumes 1 and 2, Fraction Circles Math Manipulatives Fraction Charts Boddle Learning Prodigy Engage NY
3.NF.A.3.d	 Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size. Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions with the support of a visual fraction model. 	Everyday Mathematics 4, Volumes 1 and 2, Fraction Circles Math Manipulatives Fraction Charts Boddle Learning Prodigy Engage NY

Standards for Mathematical Practices

MP1 Make sense of problems and persevere in solving them.

MP2 Reason abstractly and quantitatively.

MP4 Model with mathematics.

MP5 Use appropriate tools strategically.

MP6 Attend to precision.

Assessments		
Formative	 Entry/ Exit Slips Slate Assessments Progress Monitoring Classwork/ Homework Guided Practice Open Response Assessments Math Boxes 	
Summative	 Quizzes Unit Tests Diagnostic Assessments 	
Benchmark	Beginning, Mid, End of Year AssessmentsSTAR Assessments	
Alternative	Teacher Observation	

Accommodations and Modifications	
Special Education	 Follow 504/IEP accommodations Step by step examples Visual demonstration of skill or activity Allow for flexible grouping Student centered activities Learning Stations Small group & large group discussions Problem solving situations Restate, reword, clarify directions Provide Educational "breaks" as necessary Utilize visual and audio cues

English Language Learners	 Step by step examples Visual demonstration of skill or activity Allow for flexible grouping Student centered activities Learning Stations Small group & large group discussions Problem solving situations Utilize visual and audio cues Highlight, define, or demonstrate important vocabulary Restate, reword, clarify directions
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- ∉ L.VL.3.2. Determine or clarify the meaning of unknown and multiplemeaning academic and domain-specific words and phrases based on grade 3 reading and content, choosing flexibly from a range of strategies.

Integration of Technology

- **8.1.2.CS.1**: Select and operate computing devices that perform a variety of tasks accurately and quickly based on user needs and preferences.
- **8.1.2.NI.1**: Model and describe how individuals use computers to connect to other individuals, places, information, and ideas through a network.
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- **9.4.5.CT.4**: Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and global

Career Education- NJSLS 9

- **9.2.5.CAP.1**: Evaluate personal likes and dislikes and identify careers that might be suited to personal likes.
- **9.2.5.CAP.2**: Identify how you might like to earn an income.

Unit 4 Overview

Content Area: Mathematics

Unit Title: Measurement

Grade Level:

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3rd

Pacing: February – April (40 Days)

Unit Summary:

• Students recognize area as an attribute of two-dimensional regions. They measure the area of a shape by finding the total number of same size units of area required to cover

the shape without gaps or overlaps, a square with sides of unit length being the standard unit for measuring area. Students understand that rectangular arrays can be decomposed into identical rows or into identical columns. By decomposing rectangles into rectangular arrays of squares, students connect area to multiplication, and justify using multiplication to determine the area of a rectangle.

Standard(s) & Math Practice(s)	Learning Targets (objective) - Students will	Resources & Materials
3.M.A.1	Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram.	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Clocks Boddle Learning Prodigy Engage NY
3.M.A.2	Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem. (Clarification: "Measure and estimate liquid volumes and masses" excludes compound units such as cm3 and finding the geometric volume of a container. "Multiplying to solve one-step word problems" excludes multiplicative comparison problems (problems involving "times as much"	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Liquid Measuring Cups Weights Boddle Learning Prodigy Engage NY
3.M.B.3.a	 Recognize area as an attribute of plane figures and understand concepts of area measurement. A square with side length 1 unit, called "a unit square," is 	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Rulers

	said to have "one square unit" of area, and can be used to measure area.	Cm Cubes Boddle Learning Prodigy Engage NY
3.M.B.3.b	 Recognize area as an attribute of plane figures and understand concepts of area measurement. A plane figure which can be covered without gaps or overlaps by unit squares is said to have an area of square units. 	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Rulers Cm Cubes Boddle Learning Prodigy Engage NY
3.M.B.4	Measure areas by counting unit squares (square cm, square m, square in, square ft, and non-standard units).	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Rulers Cm Cubes Boddle Learning Prodigy Engage NY
3.M.B.5.a	 Relate area to the operations of multiplication and addition. Find the area of a rectangle with whole-number side lengths by tiling it and show that the area is the same as would be found by multiplying the side lengths. 	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Rulers Cm Cubes Boddle Learning Prodigy Engage NY
3.M.B.5.b	Relate area to the operations of multiplication and addition.Multiply side lengths to find	Everyday Mathematics 4, Volumes 1 and 2,

	areas of rectangles with whole number side lengths in the context of solving real world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning.	Math Manipulatives Rulers Cm Cubes Boddle Learning Prodigy Engage NY
3.M.B.5.c	 Relate area to the operations of multiplication and addition. Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths <i>a</i> and <i>b</i>+ <i>c</i> is the sum of <i>a</i> × <i>b</i> and <i>a</i> × <i>c</i>. Use area models to represent the distributive property in mathematical reasoning. 	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Rulers Cm Cubes Boddle Learning Prodigy Engage NY
3.M.B.5.d	 Relate area to the operations of multiplication and addition. Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real world problems. 	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Rulers Cm Cubes Boddle Learning Prodigy Engage NY
3.M.C.6	Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Rulers Cm Cubes Boddle Learning Prodigy Engage NY

Standards for Mathematical Practices

MP1 Make sense of problems and persevere in solving them.

MP2 Reason abstractly and quantitatively.

MP3 Construct viable arguments and critique the reasoning of others.

MP4 Model with mathematics.

MP5 Use appropriate tools strategically.

MP6 Attend to precision.

MP7 Look for and make use of structure.

Assessments		
Formative	 Entry/ Exit Slips Slate Assessments Progress Monitoring Classwork/ Homework Guided Practice Open Response Assessments Math Boxes 	
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Accommodations and Modifications		
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- **L.VL.3.2.** Determine or clarify the meaning of unknown and multiplemeaning academic and domain-specific words and phrases based on grade 3 reading and content, choosing flexibly from a range of strategies.

Climate Change Integration

• **3.M.C.6**: Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.

**<u>Climate Change Example</u>: Students may solve real world problems about glacier retreat that involve perimeters of polygons.

Integration of Technology

- **8.1.2.CS.1**: Select and operate computing devices that perform a variety of tasks accurately and quickly based on user needs and preferences.
- **8.1.2.NI.1**: Model and describe how individuals use computers to connect to other individuals, places, information, and ideas through a network.
- **9.4.5.DC.4**: Model safe, legal, and ethical behavior when using online or offline technology
- **9.4.5.CI.1**: Use appropriate communication technologies to collaborate with individuals with diverse perspectives about a local and/or global climate change issue and deliberate about possible solutions
- **9.4.5.CT.1**: Identify and gather relevant data that will aid in the problemsolving process
- **9.4.5.CT.3**: Describe how digital tools and technology may be used to solve problems
- **9.4.5.CT.4**: Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and global

Career Education- NJSLS 9

• **9.2.5.CAP.1**: Evaluate personal likes and dislikes and identify careers that might be suited to personal likes.

• **9.2.5.CAP.2**: Identify how you might like to earn an income.

		Unit 5 Overview
Content Area: Ma	thematic	S
Unit Title: Data L	iteracy	
Grade Level:	3rd	Pacing: April (15 Days)
Unit Summary:		
• Students dev are able to re	elop an ur present ar	derstanding of data-based questions and data collection. They ad interpret data.

Standard(s) & Math Practice(s)	Learning Targets (objective) - Students will	Resources & Materials
3.DL.A.1	Develop data-based questions and decide what data will answer the question. (e.g. "What size shoe does a 3rd grader wear?", "How many books does a 3rd grader read?")	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Boddle Learning Prodigy Engage NY
3.DL.A.2	Collect student-centered data (e.g. collect data on students' favorite ice cream flavor) or use existing data to answer data-based questions.	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Boddle Learning Prodigy Engage NY

3.DL.B.3	Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two- step "how many more" and "how many less" problems using information presented in scaled bar graphs. For example, draw a bar graph in which each square in the bar graph might represent 5 pets.	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Boddle Learning Prodigy Engage NY
3.DL.B.4	Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units—whole numbers, halves, or quarters.	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Rulers Boddle Learning Prodigy Engage NY
Standards for Mathematical Practices		
MP2 Reason abstractly and quantitatively.		
MP3 Construct viable arguments and critique the reasoning of others.		
MP5 Use appropriate tools strategically.		
MP7 Look for and make use of structure.		
MP8 Look for and express regularity in repeated reasoning.		

Assessments		
Formative	 Entry/ Exit Slips Slate Assessments Progress Monitoring Classwork/ Homework Guided Practice Open Response Assessments Math Boxes 	
Summative	QuizzesUnit TestsDiagnostic Assessments	

Benchmark	Beginning, Mid, End of Year AssessmentsSTAR Assessments
Alternative	Teacher Observations

Accommodations and Modifications		
Special Education	 Follow 504/IEP accommodations Step by step examples Visual demonstration of skill or activity Allow for flexible grouping Student centered activities Learning Stations Small group & large group discussions Problem solving situations Restate, reword, clarify directions Provide Educational "breaks" as necessary Utilize visual and audio cues 	
English Language Learners	 Step by step examples Visual demonstration of skill or activity Allow for flexible grouping Student centered activities Learning Stations Small group & large group discussions Problem solving situations Utilize visual and audio cues Highlight, define, or demonstrate important vocabulary Restate, reword, clarify directions 	
Students At-Risk of School Failure	 Step by step examples Visual demonstration of skill or activity Allow for flexible grouping Student centered activities Learning Stations Small group & large group discussions Problem solving situations Utilize visual and audio cues Highlight, define, or demonstrate important vocabulary Restate, reword, clarify directions Chunking content into small segments Shorten or reduce assignment to focus on one specific skill 	
Gifted and Talented	 Student Choice Student centered activities Enhance skill or activity based on Individual Student Need Allow for flexible grouping Problem solving situations 	

Students with 504 Plans	 Follow 504/IEP accommodations Step by step examples Visual demonstration of skill or activity Allow for flexible grouping Student centered activities Learning Stations Small group & large group discussions Problem solving situations Restate, reword, clarify directions Provide Educational "breaks" as necessary Utilize visual and audio cues
	 Restate, reword, clarify directions Provide Educational "breaks" as necessary Utilize visual and audio cues

- **6.1.5.EconET.2**: Use quantitative data to engage in cost benefit analyses of decisions that impact the individual and/or community.
- **6.1.5.EconNE.2**: Use data to describe how the availability of resources in New Jersey and other regions in the United States have impacted economic opportunities.
- **SL.PE.3.1.** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher led) with diverse partners on grade 3 topics and texts, building on others' ideas and expressing their own clearly.
- **SL.ES.3.3.** Ask and answer questions about information from a speaker, offering appropriate elaboration and detail.
- L.KL.3.1. Use knowledge of language and its conventions when writing, speaking, reading, or listening.
- **L.VL.3.2.** Determine or clarify the meaning of unknown and multiplemeaning academic and domain-specific words and phrases based on grade 3 reading and content, choosing flexibly from a range of strategies.
- **3-LS3-1** Analyze and interpret data to provide evidence that plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms
- **3-LS4-1** Analyze and interpret data from fossils to provide evidence of the organisms and the environments in which they lived long ago.
- **3-ESS2-1** Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.

Integration of Technology

- **8.1.5.DA.1**: Collect, organize, and display data in order to highlight relationships or support a claim.
- **8.1.5.DA.3**: Organize and present collected data visually to communicate insights gained from different views of the data.
- **8.1.5.DA.4**: Organize and present climate change data visually to highlight relationships or support a claim.
- 8.1.5.DA.5: Propose cause and effect relationships, predict outcomes, or

communicate ideas using data.

- **9.4.5.DC.4**: Model safe, legal, and ethical behavior when using online or offline technology
- **9.4.5.CI.1**: Use appropriate communication technologies to collaborate with individuals with diverse perspectives about a local and/or global climate change issue and deliberate about possible solutions
- **9.4.5.CT.1**: Identify and gather relevant data that will aid in the problem-solving process
- **9.4.5.CT.3**: Describe how digital tools and technology may be used to solve problems
- **9.4.5.CT.4**: Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and global

Career Education- NJSLS 9

- **9.2.5.CAP.1**: Evaluate personal likes and dislikes and identify careers that might be suited to personal likes.
- **9.2.5.CAP.2**: Identify how you might like to earn an income.

Unit 6 Overview

Content Area: Mathematics

Unit Title: Geometry

Grade Level:

3rd

Pacing: May – June (15 Days)

Unit Summary:

• Students describe, analyze, and compare properties of two-dimensional shapes. They compare and classify shapes by their sides and angles, and connect these with definitions of shapes. Students also relate their fraction work to geometry by expressing the area of part of a shape as a unit fraction of the whole.

Standard(s) & Math Practice(s)	Learning Targets (objective) - Students will	Resources & Materials

3.G.A.1	Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Geometric Shapes/Polygons Boddle Learning Prodigy Engage NY
3.G.A.2	Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. For example, partition a shape into 4 parts with equal area, and describe the area of each part as $\frac{1}{4}$ of the area of the shape.	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Geometric Shapes/Polygons Boddle Learning Prodigy Engage NY
Standards for Mathematical Practices		
MP1 Make sense of problems and persevere in solving them.		
MP2 Reason abstractly and quantitatively.		

MP3 Construct viable arguments and critique the reasoning of others.

MP4 Model with mathematics.

Assessments		
Formative	 Entry/ Exit Slips Slate Assessments Progress Monitoring Classwork/ Homework Guided Practice Open Response Assessments Math Boxes 	
Summative	QuizzesUnit TestsDiagnostic Assessments	

Benchmark	Beginning, Mid, End of Year AssessmentsSTAR Assessments
Alternative	Teacher Observations

Accommodations and Modifications	
Special Education	 Follow 504/IEP accommodations Step by step examples Visual demonstration of skill or activity Allow for flexible grouping Student centered activities Learning Stations Small group & large group discussions Problem solving situations Restate, reword, clarify directions Provide Educational "breaks" as necessary Utilize visual and audio cues
English Language Learners	 Step by step examples Visual demonstration of skill or activity Allow for flexible grouping Student centered activities Learning Stations Small group & large group discussions Problem solving situations Utilize visual and audio cues Highlight, define, or demonstrate important vocabulary Restate, reword, clarify directions
Students At-Risk of School Failure	 Step by step examples Visual demonstration of skill or activity Allow for flexible grouping Student centered activities Learning Stations Small group & large group discussions Problem solving situations Utilize visual and audio cues Highlight, define, or demonstrate important vocabulary Restate, reword, clarify directions Chunking content into small segments Shorten or reduce assignment to focus on one specific skill
Gifted and Talented	 Student Choice Student centered activities Enhance skill or activity based on Individual Student Need Allow for flexible grouping Problem solving situations

Students with 504 Plans	 Follow 504/IEP accommodations Step by step examples Visual demonstration of skill or activity Allow for flexible grouping Student centered activities Learning Stations Small group & large group discussions Problem solving situations Restate, reword, clarify directions Provide Educational "breaks" as necessary Utilize visual and audio gues
	Utilize visual and audio cues

- **SL.PE.3.1.** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher led) with diverse partners on grade 3 topics and texts, building on others' ideas and expressing their own clearly.
- **SL.ES.3.3.** Ask and answer questions about information from a speaker, offering appropriate elaboration and detail.
- L.KL.3.1. Use knowledge of language and its conventions when writing, speaking, reading, or listening.
- **L.VL.3.2.** Determine or clarify the meaning of unknown and multiplemeaning academic and domain-specific words and phrases based on grade 3 reading and content, choosing flexibly from a range of strategies.

Integration of Technology

- **8.1.2.CS.1**: Select and operate computing devices that perform a variety of tasks accurately and quickly based on user needs and preferences.
- **8.1.2.NI.1**: Model and describe how individuals use computers to connect to other individuals, places, information, and ideas through a network.
- **9.4.5.TL.1**: Compare the common uses of at least two different digital tools and identify the advantages and disadvantages of using each.
- **9.4.5.DC.4**: Model safe, legal, and ethical behavior when using online or offline technology
- **9.4.5.CT.1**: Identify and gather relevant data that will aid in the problemsolving process
- **9.4.5.CT.3**: Describe how digital tools and technology may be used to solve problems
- **9.4.5.CT.4**: Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and global

Career Education- NJSLS 9

- **9.2.5.CAP.1**: Evaluate personal likes and dislikes and identify careers that might be suited to personal likes.
- **9.2.5.CAP.2**: Identify how you might like to earn an income.

Grade 4

Unit 1 Overview		
Content Area: M	athematio	CS
Unit Title: Place	Value, Ad	ldition and Subtraction
Grade Level:	4th	Pacing: 20 Days
Unit Summary:		
 In this unit with multi- numbers in multi-digit 	students ex digit numbe expanded f whole num	ttend their understanding of the base ten systems. They work ers to practice comparing, ordering, rounding, and writing form. They begin with fluency with addition and subtraction of bers using the standard algorithm.

Standard(s) & Math Practice(s)	Learning Targets (objective) - Students will	Resources & Materials
4.NBT.A.1	Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right. For example, recognize that $700 \div 70= 10$ by applying concepts of place value and division.	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Place Value Mats Base-Ten Blocks Boddle Learning Prodigy

		Engage NY
4.NBT.A.2	Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Place Value Mats Base-Ten Blocks Boddle Learning Prodigy Engage NY
4.NBT.A.3	Use place value understanding to round multi-digit whole numbers to any place.	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Place Value Mats Base-Ten Blocks Boddle Learning Prodigy Engage NY
4.NBT.B.4	With accuracy and efficiency, add and subtract multi-digit whole numbers using the standard algorithm.	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Grid Paper Boddle Learning Prodigy Engage NY
Standards for Mathematical Practices		
 MP1 Make sense of problems and persevere in solving them. MP5 Use appropriate tools strategically. MP6 Attend to precision. MP8 Look for and express regularity in repeated reasoning. 		

Assessments	
Formative	 Entry/ Exit Slips Slate assessments Progress Monitoring Classwork/ Homework Guided Practice Open Response Assessments Math Boxes
Summative	QuizzesUnit TestsDiagnostic Assessments
Benchmark	Beginning, Mid, End of Year AssessmentsSTAR Assessments
Alternative	Teacher Observations

Accommodations and Modifications	
Special Education	 Follow 504/IEP accommodations Step by step examples Visual demonstration of skill or activity Allow for flexible grouping Student centered activities Learning Stations Small group & large group discussions Problem solving situations Restate, reword, clarify directions Provide Educational "breaks" as necessary Utilize visual and audio cues
English Language Learners	 Step by step examples Visual demonstration of skill or activity Allow for flexible grouping Student centered activities Learning Stations Small group & large group discussions Problem solving situations Utilize visual and audio cues Highlight, define, or demonstrate important vocabulary Restate, reword, clarify directions
Students At-Risk of School Failure	 Step by step examples Visual demonstration of skill or activity Allow for flexible grouping

	 Student centered activities Learning Stations Small group & large group discussions Problem solving situations Utilize visual and audio cues Highlight, define, or demonstrate important vocabulary Restate, reword, clarify directions Chunking content into small segments Shorten or reduce assignment to focus on one specific skill
Gifted and Talented	 Student Choice Student centered activities Enhance skill or activity based on Individual Student Need Allow for flexible grouping Problem solving situations
Students with 504 Plans	 Follow 504/IEP accommodations Step by step examples Visual demonstration of skill or activity Allow for flexible grouping Student centered activities Learning Stations Small group & large group discussions Problem solving situations Restate, reword, clarify directions Provide Educational "breaks" as necessary Utilize visual and audio cues

- **L.KL.4.1**: Use knowledge of language and its conventions when writing, speaking, reading, or listening.
- **L.KL.4.1.A.1**: Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases.
- L.KL.4.1.A.2: Choose words and phrases to convey ideas precisely.
- **SL.PE.4.1**. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly.
- **SL.ES.4.3**. Identify the reasons and evidence a speaker provides to support particular points.
- **L.VL.4.2.** Determine or clarify the meaning of unknown and multiple-meaning academic and domain-specific words and phrases based on grade 4 reading and content, choosing flexibly from a range of strategies.

Integration of Technology

• **8.1.2.CS.1**: Select and operate computing devices that perform a variety of tasks

accurately and quickly based on user needs and preferences.

- **8.1.2.NI.1**: Model and describe how individuals use computers to connect to other individuals, places, information, and ideas through a network.
- **9.4.5.TL.1**: Compare the common uses of at least two different digital tools and identify the advantages and disadvantages of using each.
- **9.4.5.DC.4**: Model safe, legal, and ethical behavior when using online or offline technology
- **9.4.5.CT.1**: Identify and gather relevant data that will aid in the problemsolving process
- **9.4.5.CT.3**: Describe how digital tools and technology may be used to solve problems
- **9.4.5.CT.4**: Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and global

Career Education- NJSLS 9

- **9.2.5.CAP.1**: Evaluate personal likes and dislikes and identify careers that might be suited to personal likes.
- **9.2.5.CAP.2**: Identify how you might like to earn an income.
- 9.2.5.CAP.7: Identify factors to consider before starting a business.
- **9.1.5.FP.3**: Analyze how spending choices and decision-making can result in positive or negative consequences.
- **9.1.5.PB.2**: Describe choices consumers have with money (e.g., save, spend, donate).
- **9.1.5.PB.1**: Develop a personal budget and explain how it reflects spending, saving, and charitable contributions.

Unit 2 Overview

Content Area: Mathematics

Unit Title: Multiplication and Division

4th

Grade Level:

Pacing: 45 Days

Unit Summary:

• Students begin their work in Grade 4 by revisiting their work with multiplication and division through 100 from Grade 3. They develop an understanding of multiplicative comparisons, distinguishing it from additive comparisons. They continue their study of the base-ten system, and compare, order, and round base-ten numbers. They multiply and divide multi-digit numbers, and illustrate and explain calculations using equations, arrays, and area models. They solve word problems involving adding, subtracting, multiplying, and dividing whole numbers.
Standard(s) & Math Practice(s)	Learning Targets (objective) - Students will	Resources & Materials
4.NBT.B.5	Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Grid Paper Boddle Learning Prodigy Engage NY
4.NBT.B.6	Find whole-number quotients and remainders with up to four-digit dividends and one-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 model.	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Grid Paper Boddle Learning Prodigy Engage NY
4.OA.A.1	Interpret a multiplication equation as a comparison, e.g., interpret 35 = 5 x 7 as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations.	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Dot Paper Boddle Learning Prodigy Engage NY
4.OA.A.2	Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Grid Paper Boddle Learning

		Prodigy
		Engage NY
4.OA.A.3	Solve multi-step word problems posed with whole numbers and having whole- number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Grid Paper Boddle Learning Prodigy Engage NY
4.OA.B.4	Find all factor pairs for a whole number in the range 1–100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1–100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1–100 is prime or composite.	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Grid Paper Boddle Learning Prodigy Engage NY
4.OA.C.5	Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself. For example, given the rule "Add 3" and the starting number 1, generate terms in the resulting sequence and observe that the terms appear to alternate between odd and even numbers. Explain informally why the numbers will continue to alternate in this way.	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Grid Paper Boddle Learning Prodigy Engage NY
Standards for Mathematical Practices		
MP1 Make sense of	problems and persevere in solving them.	
MP2 Reason abstractly and quantitatively.		
MP4 Model with mathematics.		
MP6 Attend to precision.		
MP7 Look for and make use of structure.		

MP8 Look for and express regularity in repeated reasoning.

Assessments	
Formative	 Entry/ Exit Slips Slate assessments Progress Monitoring Classwork/ Homework Guided Practice Open Response Assessments Math Boxes
Summative	 Quizzes Unit Tests Diagnostic Assessments
Benchmark	 Beginning, Mid, End of Year Assessments STAR Assessments
Alternative	Teacher Observations

Accommodations and Modifications	
Special Education	 Follow 504/IEP accommodations Step by step examples Visual demonstration of skill or activity Allow for flexible grouping Student centered activities Learning Stations Small group & large group discussions Problem solving situations Restate, reword, clarify directions Provide Educational "breaks" as necessary Utilize visual and audio cues
English Language Learners	 Step by step examples Visual demonstration of skill or activity Allow for flexible grouping Student centered activities Learning Stations Small group & large group discussions Problem solving situations Utilize visual and audio cues Highlight, define, or demonstrate important vocabulary

	Restate, reword, clarify directions
Students At-Risk of School Failure	 Step by step examples Visual demonstration of skill or activity Allow for flexible grouping Student centered activities Learning Stations Small group & large group discussions Problem solving situations Utilize visual and audio cues Highlight, define, or demonstrate important vocabulary Restate, reword, clarify directions Chunking content into small segments Shorten or reduce assignment to focus on one specific skill
Gifted and Talented	 Student Choice Student centered activities Enhance skill or activity based on Individual Student Need Allow for flexible grouping Problem solving situations
Students with 504 Plans	 Follow 504/IEP accommodations Step by step examples Visual demonstration of skill or activity Allow for flexible grouping Student centered activities Learning Stations Small group & large group discussions Problem solving situations Restate, reword, clarify directions Provide Educational "breaks" as necessary Utilize visual and audio cues

- **L.KL.4.1**: Use knowledge of language and its conventions when writing, speaking, reading, or listening.
- L.KL.4.1.A.1: Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases.
- L.KL.4.1.A.2: Choose words and phrases to convey ideas precisely.
- **SL.PE.4.1**. Engage effectively in a range of collaborative discussions (one-onone, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly.
- **SL.ES.4.3**. Identify the reasons and evidence a speaker provides to support particular points.
- **L.VL.4.2**. Determine or clarify the meaning of unknown and multiplemeaning academic and domain-specific words and phrases based on grade 4 reading and content, choosing flexibly from a range of strategies.

Climate Change Integration

4.OA.A.3 Solve multi-step word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.
 <u>**Climate Change Example</u>: Students may, knowing that energy and fuels are derived from natural resources and that their uses affect the climate, use the four operations to solve multi-step word problems posed with whole numbers, having

whole-number answers and that are based on energy, fuels, and natural resources.

Integration of Technology

- **8.1.2.CS.1**: Select and operate computing devices that perform a variety of tasks accurately and quickly based on user needs and preferences.
- **8.1.2.NI.1**: Model and describe how individuals use computers to connect to other individuals, places, information, and ideas through a network.
- **9.4.5.TL.1**: Compare the common uses of at least two different digital tools and identify the advantages and disadvantages of using each.
- **9.4.5.DC.4**: Model safe, legal, and ethical behavior when using online or offline technology
- **9.4.5.CT.1**: Identify and gather relevant data that will aid in the problemsolving process
- **9.4.5.CT.3**: Describe how digital tools and technology may be used to solve problems
- **9.4.5.CT.4**: Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and global

- **9.2.5.CAP.1**: Evaluate personal likes and dislikes and identify careers that might be suited to personal likes.
- **9.2.5.**CAP.2: Identify how you might like to earn an income.
- **9.2.5.CAP.7**: Identify factors to consider before starting a business.
- **9.1.5.FP.3**: Analyze how spending choices and decision-making can result in positive or negative consequences.
- **9.1.5.PB.2**: Describe choices consumers have with money (e.g., save, spend, donate).
- **9.1.5.PB.1**: Develop a personal budget and explain how it reflects spending, saving, and charitable contributions.

Unit 3 Overview Content Area: Mathematics Unit Title: Fractions and Decimals Grade Level: 4th Pacing: 45 Days Unit Summary: • Students build on their Grade 3 work with unit fractions as they explore fraction equivalence and extend this understanding to mixed numbers. This leads to the comparison of fractions and mixed numbers and the representation of both in a variety of models. They extend their understanding of fractions to decimals, comparing and ordering decimals using the same methods as for comparing fractions. Students apply what they know to be true for whole number operations to the new concepts of fraction, decimal and mixed number operations. They solve word problems involving

addition, subtraction and multiplication of fractions, decimals, and mixed numbers.

Standard(s) & Math Practice(s)	Learning Targets (objective) - Students will	Resources & Materials
4.NF.A.1	Explain why a fraction $\frac{a}{b}$ is equivalent to a fraction $\frac{(n \cdot a)}{(n \cdot b)}$ by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Fraction Circle Pieces Boddle Learning Prodigy Engage NY
4.NF.A.2	Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as $\frac{1}{2}$. Recognize that comparisons are valid only when the two fractions refer to the	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Fraction Circle Pieces

	same whole. Record the results of comparisons with symbols >, =, or <, and justify the conclusions, e.g., by using a visual fraction model.	Boddle Learning Prodigy Engage NY
4.NF.B.3.a	 Understand a fraction ^a/_b with a > 1 as a sum of fractions ¹/_b. Understand addition and subtraction of fractions as joining and separating parts referring to the same whole. 	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Fraction Circle Pieces Boddle Learning Prodigy Engage NY
4.NF.B.3.b	Understand a fraction $\frac{a}{b}$ with $a > 1$ as a sum of fractions $\frac{1}{b}$. • Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation. Justify decompositions, e.g., by using a visual fraction model. Examples: $\frac{3}{8} = \frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{3}{8}; \frac{3}{8}$ $= \frac{1}{8} + \frac{2}{8}; 2\frac{1}{8}: = 1 + 1 + \frac{1}{8} = \frac{8}{8}$ $+ \frac{8}{8} + \frac{1}{8}:$	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Fraction Circle Pieces Boddle Learning Prodigy Engage NY
4.NF.B.3.c	 Understand a fraction a/b with a > 1 as a sum of fractions 1/b . Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction. 	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Fraction Circle Pieces Boddle Learning Prodigy Engage NY
4.NF.B.3.d	Understand a fraction $\frac{a}{b}$ with $a > 1$ as a	Everyday Mathematics 4, Volumes 1 and 2,

	 sum of fractions ¹/_b . Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, e.g., by using visual fraction models and equations to represent the problem. 	Math Manipulatives Fraction Circle Pieces Boddle Learning Prodigy Engage NY
4.NF.B.4.a	Apply and extend previous understandings of multiplication to multiply a fraction by a whole number. • Understand a fraction $\frac{a}{b}$ as a multiple of $\frac{1}{b}$. For example, use a visual fraction model to represent $\frac{5}{4}$ as the product 5 $x \frac{1}{4}$, recording the conclusion by the equation $\frac{5}{4} = 5 x \frac{1}{4}$.	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Fraction Circle Pieces Boddle Learning Prodigy Engage NY
4.NF.B.4.b	Apply and extend previous understandings of multiplication to multiply a fraction by a whole number. • Understand a multiple of $\frac{a}{b}$ as a multiple of $\frac{1}{b}$, and use this understanding to multiply a fraction by a whole number. For example, use a visual fraction model to express $3 \times \frac{2}{5}$ as $6 \times \frac{1}{5}$, recognizing this product as $\frac{6}{5}$. In general, $n \times \frac{a}{b} = \frac{(n \cdot a)}{b}$.	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Fraction Circle Pieces Boddle Learning Prodigy Engage NY
4.NF.B.4.c	 Apply and extend previous understandings of multiplication to multiply a fraction by a whole number. Solve word problems involving multiplication of a fraction by a whole number, e.g., by using visual fraction models and 	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Fraction Circle Pieces Boddle Learning

	equations to represent the problem. For example, if each person at a party will eat $\frac{3}{8}$ of a pound of roast beef, and there will be 5 people at the party, how many pounds of roast beef will be needed? Between what two whole numbers does your answer lie?	Prodigy Engage NY
4.NF.C.5	Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100. For example, express $\frac{3}{10}$ as $\frac{30}{100}$ and add $\frac{3}{10}$ + $\frac{4}{100}$ = $\frac{34}{100}$. (Clarification: Students who can generate equivalent fractions can develop strategies for adding fractions with unlike denominators in general. But addition and subtraction with unlike denominators in general is not a requirement at this grade.)	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Fraction Circle Pieces Boddle Learning Prodigy Engage NY
4.NF.C.6	Use decimal notation for fractions with denominators 10 or 100. For example, rewrite 0.62 as $\frac{62}{100}$; describe a length as 0.62 meters; locate 0.62 on a number line diagram.	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Fraction Circle Pieces Boddle Learning Prodigy Engage NY
4.NF.C.7	Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when the two decimals refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions, e.g., by using a visual model.	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Fraction Circle Pieces Boddle Learning Prodigy Engage NY

Standards for Mathematical Practices

MP1 Make sense of problems and persevere in solving them.

MP2 Reason abstractly and quantitatively.

MP4 Model with mathematics.

MP5 Use appropriate tools strategically.

MP6 Attend to precision.

Assessments	
Formative	 Entry/ Exit Slips Slate assessments Progress Monitoring Classwork/ Homework Guided Practice Open Response Assessments Math Boxes
Summative	QuizzesUnit TestsDiagnostic Assessments
Benchmark	Beginning, Mid, End of Year AssessmentsSTAR Assessments
Alternative	Teacher Observations

Accommodations and Modifications	
Special Education	 Follow 504/IEP accommodations Step by step examples Visual demonstration of skill or activity Allow for flexible grouping Student centered activities Learning Stations Small group & large group discussions Problem solving situations Restate, reword, clarify directions Provide Educational "breaks" as necessary Utilize visual and audio cues

English Language Learners	 Step by step examples Visual demonstration of skill or activity Allow for flexible grouping Student centered activities Learning Stations Small group & large group discussions Problem solving situations Utilize visual and audio cues Highlight, define, or demonstrate important vocabulary Restate, reword, clarify directions
Students At-Risk of School Failure	 Step by step examples Visual demonstration of skill or activity Allow for flexible grouping Student centered activities Learning Stations Small group & large group discussions Problem solving situations Utilize visual and audio cues Highlight, define, or demonstrate important vocabulary Restate, reword, clarify directions Chunking content into small segments Shorten or reduce assignment to focus on one specific skill
Gifted and Talented	 Student Choice Student centered activities Enhance skill or activity based on Individual Student Need Allow for flexible grouping Problem solving situations
Students with 504 Plans	 Follow 504/IEP accommodations Step by step examples Visual demonstration of skill or activity Allow for flexible grouping Student centered activities Learning Stations Small group & large group discussions Problem solving situations Restate, reword, clarify directions Provide Educational "breaks" as necessary Utilize visual and audio cues

- **L.KL.4.1**: Use knowledge of language and its conventions when writing, speaking, reading, or listening.
- L.KL.4.1.A.1: Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases.
- L.KL.4.1.A.2: Choose words and phrases to convey ideas precisely.

- **SL.PE.4.1**. Engage effectively in a range of collaborative discussions (one-onone, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly.
- **SL.ES.4.3**. Identify the reasons and evidence a speaker provides to support particular points.
- **L.VL.4.2**. Determine or clarify the meaning of unknown and multiplemeaning academic and domain-specific words and phrases based on grade 4 reading and content, choosing flexibly from a range of strategies.

Integration of Technology

- **8.1.2.CS.1**: Select and operate computing devices that perform a variety of tasks accurately and quickly based on user needs and preferences.
- **8.1.2.NI.1**: Model and describe how individuals use computers to connect to other individuals, places, information, and ideas through a network.
- **9.4.5.TL.1**: Compare the common uses of at least two different digital tools and identify the advantages and disadvantages of using each.
- **9.4.5.DC.4**: Model safe, legal, and ethical behavior when using online or offline technology
- **9.4.5.CT.1**: Identify and gather relevant data that will aid in the problemsolving process
- **9.4.5.CT.3**: Describe how digital tools and technology may be used to solve problems
- **9.4.5.CT.4**: Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and global

- **9.2.5.CAP.1**: Evaluate personal likes and dislikes and identify careers that might be suited to personal likes.
- **9.2.5.CAP.2**: Identify how you might like to earn an income.
- **9.2.5.CAP.***7*: Identify factors to consider before starting a business.
- **9.1.5.FP.3**: Analyze how spending choices and decision-making can result in positive or negative consequences.
- **9.1.5.PB.2**: Describe choices consumers have with money (e.g., save, spend, donate).
- **9.1.5.PB.1**: Develop a personal budget and explain how it reflects spending, saving, and charitable contributions.

Unit 4 Overview		
Content Area: Mathematics		
Unit Title: Meas	urement	
Grade Level:	4th	Pacing: 25 Days
Unit Summary:		
 In this unit understand problems in perpendicu as geometr and measu that angle in measures. 	, learners bu ling of prope nvolving sym lar lines, poi ic shapes for re angles usi measure is ac	ild, draw, and analyze two-dimensional shapes to deepen their rties of two-dimensional objects and the use of them to solve imetry. They identify key parts of figures such as parallel lines, ints, line segments, and right angles. Learners recognize angles med by two rays, understand concepts of angle measurement, ng protractors. They sketch angles and use the understanding idditive to create and solve equations to find unknown angle

Standard(s) & Math Practice(s)	Learning Targets (objective) - Students will	Resources & Materials
4.M.A.1	Know relative sizes of measurement units within one system of units including km, m, cm. mm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table. For example, know that 1 ft is 12 times as long as 1 in. Express the length of a 4 ft snake as 48 in. Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36),	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Measurement Tools Boddle Learning Prodigy Engage NY
4.M.A.2	Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects,	Everyday Mathematics 4, Volumes 1 and 2,

	and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.	Math Manipulatives Measurement Tools Boddle Learning Prodigy Engage NY
4.M.A.3	Apply the area and perimeter formulas for rectangles in real world and mathematical problems. For example, find the width of a rectangular room given the area of the flooring and the length, by viewing the area formula as a multiplication equation with an unknown factor.	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Measurement Tools Boddle Learning Prodigy Engage NY
4.M.B.4.a	 Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement: An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through 1/360 th of a circle is called a "one-degree angle," and can be used to measure angles. 	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Geometry Template Compass/Protractor 3-D Shapes Boddle Learning Prodigy Engage NY
4.M.B.4.b	 Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement: An angle that turns through ⁿ one- degree angles is said to have an angle measure of ⁿ degrees. 	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Geometry Template Compass/Protractor 3-D Shapes Boddle Learning

		Prodigy Engage NY	
4.M.B.5	Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Geometry Template Compass/Protractor 3-D Shapes Boddle Learning Prodigy Engage NY	
4.M.B.6	Recognize angle measure as additive. When an angle is decomposed into non- overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measure.	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Geometry Template Compass/Protractor 3-D Shapes Boddle Learning Prodigy Engage NY	
	Standards for Mathematical Practices		
 MP1 Make sense of problems and persevere in solving them. MP3 Construct viable arguments and critique the reasoning of others. MP4 Model with mathematics. MP5 Use appropriate tools strategically. MP6 Attend to precision. MP7 Look for and make use of structure. MP8 Look for and express regularity in repeated reasoning. 			

Assessments		
Formative	 Entry/ Exit Slips Slate assessments Progress Monitoring Classwork/ Homework Guided Practice Open Response Assessments Math Boxes 	
Summative	QuizzesUnit TestsDiagnostic Assessments	
Benchmark	Beginning, Mid, End of Year AssessmentsSTAR Assessments	
Alternative	Teacher Observations	

Accommodations and Modifications		
Special Education	 Follow 504/IEP accommodations Step by step examples Visual demonstration of skill or activity Allow for flexible grouping Student centered activities Learning Stations Small group & large group discussions Problem solving situations Restate, reword, clarify directions Provide Educational "breaks" as necessary Utilize visual and audio cues 	
English Language Learners	 Step by step examples Visual demonstration of skill or activity Allow for flexible grouping Student centered activities Learning Stations Small group & large group discussions Problem solving situations Utilize visual and audio cues Highlight, define, or demonstrate important vocabulary Restate, reword, clarify directions 	
Students At-Risk of School Failure	Step by step examplesVisual demonstration of skill or activityAllow for flexible grouping	

	 Student centered activities Learning Stations Small group & large group discussions Problem solving situations Utilize visual and audio cues Highlight, define, or demonstrate important vocabulary Restate, reword, clarify directions Chunking content into small segments Shorten or reduce assignment to focus on one specific skill
Gifted and Talented	 Student Choice Student centered activities Enhance skill or activity based on Individual Student Need Allow for flexible grouping Problem solving situations
Students with 504 Plans	 Follow 504/IEP accommodations Step by step examples Visual demonstration of skill or activity Allow for flexible grouping Student centered activities Learning Stations Small group & large group discussions Problem solving situations Restate, reword, clarify directions Provide Educational "breaks" as necessary Utilize visual and audio cues

- **L.KL.4.1**: Use knowledge of language and its conventions when writing, speaking, reading, or listening.
- L.KL.4.1.A.1: Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases.
- L.KL.4.1.A.2: Choose words and phrases to convey ideas precisely.
- **SL.PE.4.1**. Engage effectively in a range of collaborative discussions (one-onone, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly.
- **SL.ES.4.3**. Identify the reasons and evidence a speaker provides to support particular points.
- **L.VL.4.2**. Determine or clarify the meaning of unknown and multiplemeaning academic and domain-specific words and phrases based on grade 4 reading and content, choosing flexibly from a range of strategies.

Climate Change Integration

• **4.M.A.2** Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale. ****Climate Change Example:** Students may, knowing that energy and fuels are derived from natural resources and that their uses affect the climate, use the four operations to solve word problems related to the use of natural resources and involving distance, time, liquid volume, and/or the mass of objects.

Integration of Technology

- **8.1.2.CS.1**: Select and operate computing devices that perform a variety of tasks accurately and quickly based on user needs and preferences.
- **8.1.2.NI.1**: Model and describe how individuals use computers to connect to other individuals, places, information, and ideas through a network.
- **9.4.5.TL.1**: Compare the common uses of at least two different digital tools and identify the advantages and disadvantages of using each.
- **9.4.5.DC.4**: Model safe, legal, and ethical behavior when using online or offline technology
- **9.4.5.CT.1**: Identify and gather relevant data that will aid in the problem-solving process
- **9.4.5.CT.3**: Describe how digital tools and technology may be used to solve problems
- **9.4.5.CT.4**: Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and global

- **9.2.5.CAP.1**: Evaluate personal likes and dislikes and identify careers that might be suited to personal likes.
- **9.2.5.**CAP.2: Identify how you might like to earn an income.
- **9.2.5.CAP.7**: Identify factors to consider before starting a business.
- **9.1.5.FP.3**: Analyze how spending choices and decision-making can result in positive or negative consequences.
- **9.1.5.PB.2**: Describe choices consumers have with money (e.g., save, spend, donate).
- **9.1.5.PB.1**: Develop a personal budget and explain how it reflects spending, saving, and charitable contributions.

Unit 5 Overview		
Content Area: Mathematics		
Unit Title: Data Literacy		
Grade Level:	4th	Pacing: 25 Days
Unit Summary: In this uni	t. learners w	ill continue to read, write, and interpret graphs. Learners will

• In this unit, learners will continue to read, write, and interpret graphs. Learners will organize data and understand data visualizations. They will represent and interpret data.

Standard(s) & Math Practice(s)	Learning Targets (objective) - Students will	Resources & Materials
4.DL.A.1	Create data-based questions, generate ideas based on the questions, and then refine the questions.	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives https://oceansofdata.org/node/202#elementary https://dataspire.org/blog/importance-of- inference-space-as-a-concept Boddle Learning Prodigy Engage NY
4.DL.A.2	Develop strategies to collect various types of data and organize data digitally.	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives <u>https://oceansofdata.org/node/202#elementary</u> <u>https://dataspire.org/blog/importance-of- inference-space-as-a-concept</u> Boddle Learning Prodigy Engage NY

4.DL.A.3	Understand that subsets of data can be selected and analyzed for a particular purpose.	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives <u>https://oceansofdata.org/node/202#elementary</u> Boddle Learning Prodigy Engage NY	
4.DL.A.4	Analyze visualizations of a single data set, share explanations and draw conclusions that the data supports.	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives <u>https://oceansofdata.org/node/202#elementary</u> <u>https://dataspire.org/blog/importance-of- inference-space-as-a-concept</u> Boddle Learning Prodigy Engage NY	
4.DL.B.5	Make a line plot to display a data set of measurements in fractions of a unit (½, ¼, ¼). Solve problems involving addition and subtraction of fractions by using information presented in line plots. For example, from a line plot find and interpret the difference in length between the longest and shortest specimens in an insect collection.	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Prodigy Engage NY	
	Standards for Mathematical Practices		
 MP1 Make sense of problems and persevere in solving them. MP2 Reason abstractly and quantitatively. MP3 Construct viable arguments and critique the reasoning of others. MP6 Attend to precision. MP7 Look for and make use of structure. 			

MP8 Look for and express regularity in repeated reasoning.

Assessments		
Formative	 Entry/ Exit Slips Slate assessments Progress Monitoring Classwork/ Homework Guided Practice Open Response Assessments Math Boxes 	
Summative	QuizzesUnit TestsDiagnostic Assessments	
Benchmark	Beginning, Mid, End of Year AssessmentsSTAR Assessments	
Alternative	Teacher Observations	

Accommodations and Modifications	
Special Education	 Follow 504/IEP accommodations Step by step examples Visual demonstration of skill or activity Allow for flexible grouping Student centered activities Learning Stations Small group & large group discussions Problem solving situations Restate, reword, clarify directions Provide Educational "breaks" as necessary Utilize visual and audio cues
English Language Learners	 Step by step examples Visual demonstration of skill or activity Allow for flexible grouping Student centered activities Learning Stations Small group & large group discussions Problem solving situations Utilize visual and audio cues Highlight, define, or demonstrate important vocabulary

	Restate, reword, clarify directions
Students At-Risk of School Failure	 Step by step examples Visual demonstration of skill or activity Allow for flexible grouping Student centered activities Learning Stations Small group & large group discussions Problem solving situations Utilize visual and audio cues Highlight, define, or demonstrate important vocabulary Restate, reword, clarify directions Chunking content into small segments Shorten or reduce assignment to focus on one specific skill
Gifted and Talented	 Student Choice Student centered activities Enhance skill or activity based on Individual Student Need Allow for flexible grouping Problem solving situations
Students with 504 Plans	 Follow 504/IEP accommodations Step by step examples Visual demonstration of skill or activity Allow for flexible grouping Student centered activities Learning Stations Small group & large group discussions Problem solving situations Restate, reword, clarify directions Provide Educational "breaks" as necessary Utilize visual and audio cues

- **6.1.5.EconET.2**: Use quantitative data to engage in cost benefit analyses of decisions that impact the individual and/or community.
- **6.1.5.EconNE.2**: Use data to describe how the availability of resources in New Jersey and other regions in the United States have impacted economic opportunities.
- **4-ESS2-2** Analyze and interpret data from maps to describe patterns of Earth's features.
- **L.KL.4.1**: Use knowledge of language and its conventions when writing, speaking, reading, or listening.
- L.KL.4.1.A.1: Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases.
- L.KL.4.1.A.2: Choose words and phrases to convey ideas precisely.
- SL.PE.4.1. Engage effectively in a range of collaborative discussions (one-on-

one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly.

- **SL.ES.4.3**. Identify the reasons and evidence a speaker provides to support particular points.
- **L.VL.4.2**. Determine or clarify the meaning of unknown and multiplemeaning academic and domain-specific words and phrases based on grade 4 reading and content, choosing flexibly from a range of strategies.

Climate Change Integration

• **4.DL.B.5** Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Solve problems involving addition and subtraction of fractions by using information presented in line plots. For example, from a line plot find and interpret the difference in length between the longest and shortest specimens in an insect collection.

<u>Climate Change Example</u>**: Students may, knowing that energy and fuels are derived from natural resources and that their uses affect the climate, make a line plot to display a data set of measurements in fractions of a unit.

Integration of Technology

- **8.1.2.CS.1**: Select and operate computing devices that perform a variety of tasks accurately and quickly based on user needs and preferences.
- **8.1.2.NI.1**: Model and describe how individuals use computers to connect to other individuals, places, information, and ideas through a network.
- **9.4.5.TL.1**: Compare the common uses of at least two different digital tools and identify the advantages and disadvantages of using each.
- **9.4.5.DC.4**: Model safe, legal, and ethical behavior when using online or offline technology
- **9.4.5.CT.1**: Identify and gather relevant data that will aid in the problem-solving process
- **9.4.5.CT.3**: Describe how digital tools and technology may be used to solve problems
- **9.4.5.CT.4**: Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and global

- **9.2.5.CAP.1**: Evaluate personal likes and dislikes and identify careers that might be suited to personal likes.
- **9.2.5.CAP.2**: Identify how you might like to earn an income.
- **9.2.5.CAP.7**: Identify factors to consider before starting a business.
- 9.1.5.FP.3: Analyze how spending choices and decision-making can result in

positive or negative consequences.

- **9.1.5.PB.2**: Describe choices consumers have with money (e.g., save, spend, donate).
- **9.1.5.PB.1**: Develop a personal budget and explain how it reflects spending, saving, and charitable contributions.

Unit 6 Overview		
Content Area: Mathematics		
Unit Title: Geometry		
Grade Level: 4th Timeline: 20 Days		
Unit Summary:		
• In this unit, students will learn that lines, angles and shapes can be analyzed, described, and classified based on their properties, such as having parallel sides,		

• In this unit, students will learn that lines, angles and shapes can be analyzed, described, and classified based on their properties, such as having parallel sides, perpendicular sides, particular angles measures, and line symmetry. Students will be able to identify, estimate, draw and measure angles in whole-number degrees using a protractor. Students will be able to construct lines of symmetry for a two-dimensional figures.

Standard(s) & Math Practice(s)	Learning Targets (objective) - Students will	Resources & Materials
4.G.A.1	Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Geometry Template Compass Boddle Learning Prodigy Engage NY

4.G.A.2	Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category and identify right triangles.	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Geometry Template Compass Boddle Learning Prodigy Engage NY
4.G.A.3	Recognize a line of symmetry for a two- dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Geometry Template Compass Boddle Learning Prodigy Engage NY
Standards for Mathematical Practices		
MP1 Make sense of	problems and persevere in solving them.	
MP3 Construct viab	ble arguments and critique the reasoning of o	others.
MP4 Model with m	athematics.	
MP5 Use appropriate tools strategically.		
MP6 Attend to prec	eision.	

Assessments		
Formative	 Entry/ Exit Slips Slate assessments Progress Monitoring Classwork/ Homework Guided Practice Open Response Assessments Math Boxes 	

Summative	 Quizzes Unit Tests Diagnostic Assessments
Benchmark	Beginning, Mid, End of Year AssessmentsSTAR Assessments
Alternative	Teacher Observations

	Accommodations and Modifications	
Special Education	 Follow 504/IEP accommodations Step by step examples Visual demonstration of skill or activity Allow for flexible grouping Student centered activities Learning Stations Small group & large group discussions Problem solving situations Restate, reword, clarify directions Provide Educational "breaks" as necessary Utilize visual and audio cues 	
English Language Learners	 Step by step examples Visual demonstration of skill or activity Allow for flexible grouping Student centered activities Learning Stations Small group & large group discussions Problem solving situations Utilize visual and audio cues Highlight, define, or demonstrate important vocabulary Restate, reword, clarify directions 	
Students At-Risk of School Failure	 Step by step examples Visual demonstration of skill or activity Allow for flexible grouping Student centered activities Learning Stations Small group & large group discussions Problem solving situations Utilize visual and audio cues Highlight, define, or demonstrate important vocabulary Restate, reword, clarify directions Chunking content into small segments Shorten or reduce assignment to focus on one specific skill 	
Gifted and Talented	Student Choice	

	 Student centered activities Enhance skill or activity based on Individual Student Need Allow for flexible grouping Problem solving situations
Students with 504 Plans	 Follow 504/IEP accommodations Step by step examples Visual demonstration of skill or activity Allow for flexible grouping Student centered activities Learning Stations Small group & large group discussions Problem solving situations Restate, reword, clarify directions Provide Educational "breaks" as necessary Utilize visual and audio cues

- **L.KL.4.1**: Use knowledge of language and its conventions when writing, speaking, reading, or listening.
- L.KL.4.1.A.1: Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases.
- L.KL.4.1.A.2: Choose words and phrases to convey ideas precisely.
- **SL.PE.4.1**. Engage effectively in a range of collaborative discussions (one-onone, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly.
- **SL.ES.4.3**. Identify the reasons and evidence a speaker provides to support particular points.
- **L.VL.4.2**. Determine or clarify the meaning of unknown and multiplemeaning academic and domain-specific words and phrases based on grade 4 reading and content, choosing flexibly from a range of strategies.

Integration of Technology

- **8.1.2.CS.1**: Select and operate computing devices that perform a variety of tasks accurately and quickly based on user needs and preferences.
- **8.1.2.NI.1**: Model and describe how individuals use computers to connect to other individuals, places, information, and ideas through a network.
- **9.4.5.TL.1**: Compare the common uses of at least two different digital tools and identify the advantages and disadvantages of using each.
- **9.4.5.DC.4**: Model safe, legal, and ethical behavior when using online or offline technology
- **9.4.5.CT.1**: Identify and gather relevant data that will aid in the problemsolving process

- **9.4.5.CT.3**: Describe how digital tools and technology may be used to solve problems
- **9.4.5.CT.4**: Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and global

Career Education- NJSLS 9

- **9.2.5.CAP.1**: Evaluate personal likes and dislikes and identify careers that might be suited to personal likes.
- **9.2.5.CAP.2**: Identify how you might like to earn an income.
- **9.2.5.CAP.7**: Identify factors to consider before starting a business.
- **9.1.5.FP.3**: Analyze how spending choices and decision-making can result in positive or negative consequences.
- **9.1.5.PB.2**: Describe choices consumers have with money (e.g., save, spend, donate).
- **9.1.5.PB.1**: Develop a personal budget and explain how it reflects spending, saving, and charitable contributions.

Grade 5

Unit 1 Overview	
Content Area: Mathematics	
Unit Title: Numerical Operations with Whole Numbers	
Grade Level: 5th Pacing: 35 Days	
 Unit Summary: In this unit, students expand their previous understanding of place value to understand powers of 10 and movement within the place value system. Students will add, subtract, multiply, and divide multi-digit numbers accurately and efficiently. Students will use grouping symbols to solve multi-step problems in the correct order of 	

operations. Grade 5 is the last grade that the NBT domain appears in the Student

Learning Standards.

Standard(s) & Math Practice(s)	Learning Targets (objective) - Students will	Resources & Materials
5.OA.A.1	Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Grid Paper Boddle Learning Prodigy Engage NY
5.OA.A.2	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 $2 x (8+7)$. Recognize that $3 x (18,932+921)$ is three times as large as $18,932 + 921$ without having to calculate the indicated sum or product.	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Grid Paper Boddle Learning Prodigy Engage NY
5.OA.B.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 o, and given the rule "Add 6" and the starting number o, 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.	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Grid Paper Boddle Learning Prodigy Engage NY
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 of what it represents in the	Everyday Mathematics 4, Volumes 1 and 2,

	place to its left.	Math Manipulatives Place Value Chart Grid Paper Boddle Learning Prodigy Engage NY
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.	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Place Value Chart Grid Paper Boddle Learning Prodigy Engage NY
5.NBT.B.5	With accuracy and efficiency, multiply multi-digit whole numbers using the standard algorithm.	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Grid Paper Boddle Learning Prodigy Engage NY
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.	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Grid Paper Boddle Learning Prodigy Engage NY
5.M.A.1	Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm	Everyday Mathematics 4, Volumes 1 and 2,

	to 0.05 m), and use these conversions in	Math Manipulatives
	solving multi-step, real world problems.	Tables/Charts
		Grid Paper
		Boddle Learning
		Prodigy
		Engage NY
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Standards for Mathematical Practices		
MP1 Make sense of problems and persevere in solving them.		
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MP2 Reason abstra	ctly and quantitatively.	
MP2 Reason abstra MP5 Use appropria	ctly and quantitatively. te tools strategically.	
MP2 Reason abstra MP5 Use appropria MP6 Attend to prec	ctly and quantitatively. te tools strategically. ision.	
MP2 Reason abstra MP5 Use appropria MP6 Attend to prec MP8 Look for and e	ctly and quantitatively. te tools strategically. ision. express regularity in repeated reasoning.	

Assessments		
Formative	 Entry/ Exit Slips Slate assessments Progress Monitoring Classwork/ Homework Guided Practice Open Response Assessments Math Boxes 	
Summative	QuizzesUnit TestsDiagnostic Assessments	
Benchmark	Beginning, Mid, End of Year AssessmentsSTAR Assessments	
Alternative	Teacher Observations	

Accommodations and Modifications		
Special Education	 Follow 504/IEP accommodations Step by step examples Visual demonstration of skill or activity Allow for flexible grouping Student centered activities Learning Stations Small group & large group discussions Problem solving situations Restate, reword, clarify directions Provide Educational "breaks" as necessary Utilize visual and audio cues 	
English Language Learners	 Step by step examples Visual demonstration of skill or activity Allow for flexible grouping Student centered activities Learning Stations Small group & large group discussions Problem solving situations Utilize visual and audio cues Highlight, define, or demonstrate important vocabulary Restate, reword, clarify directions 	
Students At-Risk of School Failure	 Step by step examples Visual demonstration of skill or activity Allow for flexible grouping Student centered activities Learning Stations Small group & large group discussions Problem solving situations Utilize visual and audio cues Highlight, define, or demonstrate important vocabulary Restate, reword, clarify directions Chunking content into small segments Shorten or reduce assignment to focus on one specific skill 	
Gifted and Talented	 Student Choice Student centered activities Enhance skill or activity based on Individual Student Need Allow for flexible grouping Problem solving situations 	
Students with 504 Plans	 Follow 504/IEP accommodations Step by step examples Visual demonstration of skill or activity Allow for flexible grouping Student centered activities Learning Stations Small group & large group discussions 	

 Restate, reword, clarify directions Provide Educational "breaks" as necessary Utilize visual and audio cues

- **L.KL.5.1.** Use knowledge of language and its conventions when writing, speaking, reading, or listening.
- **L.KL.5.1.A** Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases.
- **L.VL.5.2.** Determine or clarify the meaning of unknown and multiple-meaning academic and domain-specific words and phrases based on grade 5 reading and content, choosing flexibly from a range of strategies.
- **SL.PE.5.1.** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 5 topics and texts, building on others' ideas and expressing their own clearly.
- **SL.ES.5.3.** Summarize the points a speaker makes and explain how each claim is supported by reasons and evidence.

Integration of Technology

- **8.1.2.CS.1**: Select and operate computing devices that perform a variety of tasks accurately and quickly based on user needs and preferences.
- **8.1.2.NI.1**: Model and describe how individuals use computers to connect to other individuals, places, information, and ideas through a network.
- **9.4.5.TL.1**: Compare the common uses of at least two different digital tools and identify the advantages and disadvantages of using each.
- **9.4.5.DC.4**: Model safe, legal, and ethical behavior when using online or offline technology
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- **9.4.5.CT.4**: Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and global

- **9.2.5.CAP.1**: Evaluate personal likes and dislikes and identify careers that might be suited to person
- al likes.

- **9.2.5.CAP.2**: Identify how you might like to earn an income.
- **9.2.5.CAP.7**: Identify factors to consider before starting a business.
- **9.1.5.FP.3**: Analyze how spending choices and decision-making can result in positive or negative consequences.
- **9.1.5.PB.2**: Describe choices consumers have with money (e.g., save, spend, donate).
- **9.1.5.PB.1**: Develop a personal budget and explain how it reflects spending, saving, and charitable contributions.

Unit 2 Overview

Content Area: Mathematics

Unit Title: Place Value and Decimals

Grade Level: 5th Pacing: 35 Days

Unit Summary:

• In this unit, students expand their previous understanding of place value to include decimal numbers. Understanding of the place value system will allow students to grasp and deepen the concepts of multiplication and division. Grade 5 is the last grade that the NBT domain appears in the Student Learning Standards.

Standard(s) & Math Practice(s)	Learning Targets (objective) - Students will	Resources & Materials	
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 $\frac{1}{10}$ of what it represents in the place to its left.	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Place Value Chart Grid Paper Boddle Learning	

		Prodigy Engage NY
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.	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Place Value Chart Grid Paper Boddle Learning Prodigy Engage NY
5.NBT.A.3.a	Read, write, and compare decimals to thousandths. • Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g., $347.392 =$ $3 \times 100 + 4 \times 10 + 7 \times 1 + 3 \times (\frac{1}{10})$ $) + 9 \times (\frac{1}{100}) + 2 \times (\frac{1}{1000})$.	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Place Value Chart Grid Paper Boddle Learning Prodigy Engage NY
5.NBT.A.3.b	 Read, write, and compare decimals to thousandths. Compare two decimals to thousandths based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons. 	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Place Value Chart Grid Paper Boddle Learning Prodigy Engage NY
5.NBT.A.4	Use place value understanding to round decimals to any place.	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Place Value Chart

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		Prodigy
		Engage NY
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.	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Grid Paper Area Model Mats Boddle Learning Prodigy
		Engage NY
5.M.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.	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Grid Paper Boddle Learning Prodigy Engage NY
Standards for Mathematical Practices		
MP1 Make sense of problems and persevere in solving them.		
MP3 Construct viable arguments and critique the reasoning of others.		
MP6 Attend to precision.		
MP ₇ Look for and make use of structure.		
MP8 Look for and express regularity in repeated reasoning.		

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Unit 3 Overview

Content Area: Mathematics

Unit Title: Operations with Fractions

Grade Level: 5th Pacing: 50 Days

Unit Summary:

• In this unit, students will use what they've learned in Grades 3 and 4 about equivalency in terms of visual models and benchmarks to extend understanding of adding and subtracting fractions, including mixed numbers. They reason about size of fractions to make sense of their answers. Students will develop an understanding of the connection between fractions and division. They will use this understanding to explore the relationship of multiplication and division when multiplying fractions. It is important to note that in some cases it may not be necessary to find least common denominator to add fractions with unlike denominators. Students should be encouraged to use their conceptual understanding of fractions rather than just using the algorithm for adding fractions.

Standard(s) & Math Practice(s)	Learning Targets (objective) - Students will	Resources & Materials	
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, $\frac{2}{3} + \frac{5}{4} = \frac{8}{12} + \frac{15}{12} = \frac{23}{12}$. (In general, $\frac{a}{b} + \frac{c}{d} = \frac{(ad+bc)}{bd}$).	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Grid Paper Fraction Circle Pieces Equivalent Fraction Chart Boddle Learning Prodigy Engage NY	
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. For example, recognize an incorrect result $\frac{2}{5} + \frac{1}{2} = \frac{3}{7}$, by observing that $\frac{3}{7} < \frac{1}{2}$.	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Grid Paper Fraction Circle Pieces Equivalent Fraction Chart Boddle Learning Prodigy Engage NY	
5.NF.B.3	Interpret a fraction as division of the numerator by the denominator (i.e., $\frac{a}{b} = a$ \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. For example, interpret $\frac{3}{4}$ as the result of dividing 3 by 4, noting that $\frac{3}{4}$ multiplied by 4 equals 3, and that when 3 wholes are shared equally among 4	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Grid Paper Fraction Circle Pieces Equivalent Fraction Chart Boddle Learning	

	people each person has a share of size $\frac{3}{4}$. If 9 people want to share a 50-pound sack of rice equally by weight, how many pounds of rice should each person get? Between what two whole numbers does your answer lie?	Prodigy Engage NY
5.NF.B.4.a	Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction. • Interpret the product $\left(\frac{a}{b}\right) x q$ as a parts of a partition of q into b equal parts; equivalently, as the result of a sequence of operations $a \ x \ q \ \div b$. For example, use a visual fraction model to show $\left(\frac{2}{3}\right) x \ 4 = \frac{8}{3}$, and create a story context for this equation. Do the same with $\left(\frac{2}{3}\right)$ $x \left(\frac{4}{5}\right) = \frac{8}{15}$. (In general, $\left(\frac{a}{b}\right) x \left(\frac{c}{d}\right)$ $= \left(\frac{ac}{bd}\right)$).	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Grid Paper Fraction Circle Pieces Equivalent Fraction Chart Boddle Learning Prodigy Engage NY
5.NF.B.4.b	 Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction. 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. 	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Grid Paper Fraction Circle Pieces Equivalent Fraction Chart Boddle Learning Prodigy Engage NY
5.NF.B.5.a	Interpret multiplication as scaling (resizing), by:Comparing the size of a	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives

		•
	product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication.	Grid Paper Fraction Circle Pieces Equivalent Fraction Chart Boddle Learning Prodigy Engage NY
5.NF.B.5.b	Interpret multiplication as scaling (resizing), by: • 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 less than 1 results in a product smaller than the given number; and relating the principle of fraction equivalence $\frac{a}{b} = \left(\frac{n \times a}{n \times b}\right)$ t o the effect of multiplying $\frac{a}{b}$ by 1.	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Grid Paper Fraction Circle Pieces Equivalent Fraction Chart Boddle Learning Prodigy Engage NY
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.	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Grid Paper Fraction Circle Pieces Equivalent Fraction Chart Boddle Learning Prodigy Engage NY
5.NF.B.7.a	Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions.	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives

	• Interpret division of a unit fraction by a non-zero whole number, and compute such quotients. For example, create a story context for $\frac{1}{3} \div 4$, and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that $(\frac{1}{3}) \div 4 = (\frac{1}{12})$ because $(\frac{1}{12}) \ge 4 = (\frac{1}{3})$.	Grid Paper Fraction Circle Pieces Equivalent Fraction Chart Boddle Learning Prodigy Engage NY
5.NF.B.7.b	Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions. • Interpret division of a whole number by a unit fraction, and compute such quotients. For example, create a story context for $4 \div (\frac{1}{5})$, and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that $4 \div (\frac{1}{5})$ = 20 because 20 x $(\frac{1}{5}) = 4$.	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Grid Paper Fraction Circle Pieces Equivalent Fraction Chart Boddle Learning Prodigy Engage NY
5.NF.B.7.c	 Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions. 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 	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Grid Paper Fraction Circle Pieces Equivalent Fraction Chart Boddle Learning Prodigy Engage NY

	cups of raisins?	
Standards for Mathematical Practices		
MP1 Make sense of	problems and persevere in solving them.	
MP2 Reason abstractly and quantitatively.		
MP4 Model with mathematics.		
MP5 Use appropriate tools strategically.		
MP6 Attend to precision.		
MP8 Look for and express regularity in repeated reasoning.		

Assessments		
Formative	 Entry/ Exit Slips Slate assessments Progress Monitoring Classwork/ Homework Guided Practice Open Response Assessments Math Boxes 	
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Alternative	Teacher Observations	

Accommodations and Modifications		
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- **L.KL.5.1.A** Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases.
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Climate Change Integration

5.NF.B.3 Interpret a fraction as division of the numerator by the denominator (i.e., $\frac{a}{b} = a \div b$). 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. For example, interpret $\frac{3}{4}$ as the result of dividing 3 by 4, noting that $\frac{3}{4}$ multiplied by 4 equals 3, and that when 3 wholes are shared equally among 4 people each person has a share of size $\frac{3}{4}$. If 9 people want to share a 50-pound sack of rice equally by weight, how many pounds of rice should each person get? Between what two whole numbers does your answer lie? Climate Change Example: To examine the impact climate change has on agriculture, students may solve word problems about the reduced yields of staple crops and their distribution that involve division of whole numbers and lead to answers in the form of fractions. 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 $\frac{1}{2}$ lb. of chocolate equally? How many $\frac{1}{3}$ -cup servings are in 2 cups of raisins? Climate Change Example: To examine the impact climate change has on agriculture, students may solve real-world problems about the reduced yields of staple crops and their distribution that involve division of unit fractions by non-zero whole numbers and/or division of whole numbers by unit fractions.

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Unit 4 Overview		
Content Area: Mathematics		
Unit Title: Area and Volume		
Grade Level:	5th	Pacing: 25 Days
Unit Summary:		

• In this unit, students expand their understanding of area by utilizing and counting whole and fractional unit squares. students expand their understanding of geometric measurement and spatial structuring to include volume as an attribute of three-dimensional space. In this unit, students develop this understanding using concrete models to discover strategies for finding area and volume, whereas in later units, students generalize this understanding in real-world problems and apply strategies and formulas. Area is addressed in two units (unit 1 and unit 7). Volume is addressed in two units (unit 1 and unit 6) because it is a major emphasis in Grade 5. The connection to multiplication and addition provides an opportunity for students to start the year off by applying the multiplication and addition strategies they learned in previous grades in a new, interesting context.

Standard(s) & Math Practice(s)	Learning Targets (objective) - Students will	Resources & Materials
5.M.B.2.a	 Recognize volume as an attribute of solid figures and understand concepts of volume measurement. 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.M.B.2.b	 Recognize volume as an attribute of solid figures and understand concepts of volume measurement. 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. 	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Rectangular Prisms Cm Unit Cubes Pattern Blocks Grid Paper Boddle Learning Prodigy Engage NY
5.M.B.3	Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and non-standard units.	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Rectangular Prisms Cm Unit Cubes Pattern Blocks Grid Paper Boddle Learning Prodigy

		Engage NY
5.M.B.4.a	 Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume. 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. 	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Rectangular Prisms Cm Unit Cubes Pattern Blocks Grid Paper Boddle Learning Prodigy Engage NY
5.M.B.4.b	 Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume. Apply the formulas V = l x w x h and V = B x 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. 	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Rectangular Prisms Cm Unit Cubes Pattern Blocks Grid Paper Boddle Learning Prodigy Engage NY
5.M.B.4.c	 Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume. 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, 	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Rectangular Prisms Cm Unit Cubes Pattern Blocks Grid Paper

	applying this technique to solve real world problems.	Boddle Learning Prodigy Engage NY
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- **9.4.5.TL.1**: Compare the common uses of at least two different digital tools and identify the advantages and disadvantages of using each.
- **9.4.5.DC.4**: Model safe, legal, and ethical behavior when using online or offline technology
- **9.4.5.CT.1**: Identify and gather relevant data that will aid in the problemsolving process
- **9.4.5.CT.3**: Describe how digital tools and technology may be used to solve problems
- **9.4.5.CT.4**: Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and global

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- **9.2.5.CAP.1**: Evaluate personal likes and dislikes and identify careers that might be suited to personal likes.
- **9.2.5.CAP.2**: Identify how you might like to earn an income.
- **9.2.5.CAP.7**: Identify factors to consider before starting a business.
- **9.1.5.FP.3**: Analyze how spending choices and decision-making can result in positive or negative consequences.
- **9.1.5.PB.2**: Describe choices consumers have with money (e.g., save, spend, donate).
- **9.1.5.PB.1**: Develop a personal budget and explain how it reflects spending, saving, and charitable contributions.

Unit 5 Overview

Content Area: Mathematics

5th

Unit Title: Geometry: Coordinate Planes and Hierarchies

Grade Level:

Pacing: 15 Days

Unit Summary:

• In this unit, students are introduced to the coordinate plane, applying their knowledge of the number line to understand the relationship of the two dimensions of a point in the coordinate plane. Students connect their work with numerical patterns to form ordered pairs and graph these ordered pairs in the first quadrant of a coordinate plane. Students use this model to make sense of and explain the relationships within the numerical patterns they generate. Students begin understanding how attributes connect two-dimensional figures into sub-categories, as well as how these sub-categories are connected to each other in a hierarchy.

Standard(s) & Math Practice(s)	Learning Targets (objective) - Students will	Resources & Materials
5.G.A.1	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 o 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).	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Coordinate Grids Graph Paper Boddle Learning Prodigy Engage NY
5.G.A.2	Represent real world and mathematical	Everyday Mathematics 4,

	problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.	Volumes 1 and 2, Math Manipulatives Coordinate Grids Graph Paper Boddle Learning Prodigy Engage NY
5.G.B.3	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.	Everyday Mathematics 4, Volumes 1 and 2, Two-Dimensional Shapes Hierarchy Poster Math Manipulatives Coordinate Grids Grid Paper Boddle Learning Prodigy Engage NY
5.G.B.4	Classify two-dimensional figures in a hierarchy based on properties.	Everyday Mathematics 4, Volumes 1 and 2, Two-Dimensional Shapes Hierarchy Poster Math Manipulatives Coordinate Grids Grid Paper Boddle Learning Prodigy Engage NY
Standards for Mathematical Practices		
MP1 Make sense of problems and persevere in solving them. MP2 Reason abstractly and quantitatively.		

MP3 Construct viable arguments and critique the reasoning of others.

 $\mathbf{MP4}$ Model with mathematics.

MP5 Use appropriate tools strategically.

MP6 Attend to precision.

MP7 Look for and make use of structure.

MP8 Look for and express regularity in repeated reasoning.

Assessments		
Formative	 Entry/ Exit Slips Slate assessments Progress Monitoring Classwork/ Homework Guided Practice Open Response Assessments Math Boxes 	
Summative	 Quizzes Unit Tests Diagnostic Assessments 	
Benchmark	 Beginning, Mid, End of Year Assessments STAR Assessments 	
Alternative	Teacher Observations	

Accommodations and Modifications		
Special Education	 Follow 504/IEP accommodations Step by step examples Visual demonstration of skill or activity Allow for flexible grouping Student centered activities Learning Stations Small group & large group discussions Problem solving situations Restate, reword, clarify directions Provide Educational "breaks" as necessary Utilize visual and audio cues 	
English Language	• Step by step examples	

Learners	 Visual demonstration of skill or activity Allow for flexible grouping Student centered activities Learning Stations Small group & large group discussions Problem solving situations Utilize visual and audio cues Highlight, define, or demonstrate important vocabulary Restate, reword, clarify directions
Students At-Risk of School Failure	 Step by step examples Visual demonstration of skill or activity Allow for flexible grouping Student centered activities Learning Stations Small group & large group discussions Problem solving situations Utilize visual and audio cues Highlight, define, or demonstrate important vocabulary Restate, reword, clarify directions Chunking content into small segments Shorten or reduce assignment to focus on one specific skill
Gifted and Talented	 Student Choice Student centered activities Enhance skill or activity based on Individual Student Need Allow for flexible grouping Problem solving situations
Students with 504 Plans	 Follow 504/IEP accommodations Step by step examples Visual demonstration of skill or activity Allow for flexible grouping Student centered activities Learning Stations Small group & large group discussions Problem solving situations Restate, reword, clarify directions Provide Educational "breaks" as necessary Utilize visual and audio cues

- **5-PS1-2:** Measure and graph quantities to provide evidence that regardless of the type of change that occurs when heating, cooling, or mixing substances, the total weight of matter is conserved.
- **5-ESS1-2** Represent data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky.

- **5-ESS2-2:** Describe and graph the amounts of salt water and fresh water in various reservoirs to provide evidence about the distribution of water on Earth.
- **L.KL.5.1.** Use knowledge of language and its conventions when writing, speaking, reading, or listening.
- **L.KL.5.1.A** Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases.
- **L.VL.5.2.** Determine or clarify the meaning of unknown and multiplemeaning academic and domain-specific words and phrases based on grade 5 reading and content, choosing flexibly from a range of strategies.
- **SL.PE.5.1.** Engage effectively in a range of collaborative discussions (one-onone, in groups, and teacher-led) with diverse partners on grade 5 topics and texts, building on others' ideas and expressing their own clearly.
- **SL.ES.5.3.** Summarize the points a speaker makes and explain how each claim is supported by reasons and evidence.

Climate Change Integration

• **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.

<u>Climate Change Example</u>: Students may represent real world problems about the reduced yields of staple crops by graphing points in the first quadrant of the coordinate plane; Students may interpret coordinate values of points in the agricultural context.

- **8.1.2.CS.1**: Select and operate computing devices that perform a variety of tasks accurately and quickly based on user needs and preferences.
- **8.1.2.NI.1**: Model and describe how individuals use computers to connect to other individuals, places, information, and ideas through a network.
- **9.4.5.TL.1**: Compare the common uses of at least two different digital tools and identify the advantages and disadvantages of using each.
- **9.4.5.DC.4**: Model safe, legal, and ethical behavior when using online or offline technology
- **9.4.5.CT.1**: Identify and gather relevant data that will aid in the problemsolving process
- **9.4.5.CT.3**: Describe how digital tools and technology may be used to solve problems
- **9.4.5.CT.4**: Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and global

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- **9.2.5.CAP.2**: Identify how you might like to earn an income.
- **9.2.5.CAP.7**: Identify factors to consider before starting a business.
- **9.1.5.FP.3**: Analyze how spending choices and decision-making can result in positive or negative consequences.
- **9.1.5.PB.2**: Describe choices consumers have with money (e.g., save, spend, donate).
- **9.1.5.PB.1**: Develop a personal budget and explain how it reflects spending, saving, and charitable contributions.

Unit 6 Overview		
Content Area:	Mathemat	ics
Unit Title: Data	a Literacy	
Grade Level:	5th	Pacing: 20 Days
Unit Summary In this un through c 	: it, students harts, graph	will develop strategies to collect, organize, and represent data ns, etc. They will understand how different visualizations can

patterns.				
Standard(s) & Math Practice(s)	Learning Targets (objective) - Students will	Resources & Materials		
5.DL.A.1	Understand how different visualizations can highlight different aspects of data. Ask questions and interpret data visualizations to describe and analyze patterns.	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Data Graphs		

Grid Paper

5 DI A 2	Develop strategies to collect, organize	Boddle Learning Prodigy Engage NY
5.DL.A.2	and represent data of various types and from various sources. Communicate results digitally through a data visual (e.g. chart, storyboard, video presentation).	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Data Graphs Grid Paper Boddle Learning Prodigy Engage NY
5.DL.A.3	Collect and clean data to be analyzable (e.g., make sure each entry is formatted correctly, deal with missing or incomplete data).	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Data Graphs Grid Paper Boddle Learning Prodigy Engage NY
5.DL.A.4	Using appropriate visualizations (i.e. double line plot, double bar graph), analyze data across samples.	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives Data Graphs Grid Paper Boddle Learning Prodigy Engage NY
5.DL.B.5	Make a line plot to display a data set of measurements in fractions of a unit (½, ¼, ⅛). Use operations on fractions for this grade to solve problems involving information presented in line plots. For	Everyday Mathematics 4, Volumes 1 and 2, Math Manipulatives

	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.	Data Graphs Grid Paper Boddle Learning Prodigy Engage NY		
Standards for Mathematical Practices				
MP1 Make sense of problems and persevere in solving them.				
MP2 Reason abstractly and quantitatively.				
MP3 Construct viable arguments and critique the reasoning of others.				
MP4 Model with mathematics.				
MP5 Use appropriate tools strategically.				
MP6 Attend to precision.				
MP7 Look for and make use of structure.				
MP8 Look for and express regularity in repeated reasoning.				

Assessments			
Formative	 Entry/ Exit Slips Slate assessments Progress Monitoring Classwork/ Homework Guided Practice Open Response Assessments Math Boxes 		
Summative	 Quizzes Unit Tests Diagnostic Assessments 		
Benchmark	Beginning, Mid, End of Year AssessmentsSTAR Assessments		
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Accommodations and Modifications				
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English Language Learners	 Step by step examples Visual demonstration of skill or activity Allow for flexible grouping Student centered activities Learning Stations Small group & large group discussions Problem solving situations Utilize visual and audio cues Highlight, define, or demonstrate important vocabulary Restate, reword, clarify directions 			
Students At-Risk of School Failure	 Step by step examples Visual demonstration of skill or activity Allow for flexible grouping Student centered activities Learning Stations Small group & large group discussions Problem solving situations Utilize visual and audio cues Highlight, define, or demonstrate important vocabulary Restate, reword, clarify directions Chunking content into small segments Shorten or reduce assignment to focus on one specific skill 			
Gifted and Talented	 Student Choice Student centered activities Enhance skill or activity based on Individual Student Need Allow for flexible grouping Problem solving situations 			
Students with 504 Plans	 Follow 504/IEP accommodations Step by step examples Visual demonstration of skill or activity Allow for flexible grouping Student centered activities Learning Stations Small group & large group discussions 			

 Restate, reword, clarify directions Provide Educational "breaks" as necessary Utilize visual and audio cues

Int	erdis	ciplina	ry C	onnec	tions	

- **5-PS1-2:** Measure and graph quantities to provide evidence that regardless of the type of change that occurs when heating, cooling, or mixing substances, the total weight of matter is conserved.
- **5-ESS1-2** Represent data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky.
- **5-ESS2-2:** Describe and graph the amounts of salt water and fresh water in various reservoirs to provide evidence about the distribution of water on Earth.
- **6.1.5.EconET.2**: Use quantitative data to engage in cost benefit analyses of decisions that impact the individual and/or community.
- **6.1.5.EconNE.2**: Use data to describe how the availability of resources in New Jersey and other regions in the United States have impacted economic opportunities.
- **L.KL.5.1.** Use knowledge of language and its conventions when writing, speaking, reading, or listening.
- **L.KL.5.1.A** Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases.
- **L.VL.5.2.** Determine or clarify the meaning of unknown and multiplemeaning academic and domain-specific words and phrases based on grade 5 reading and content, choosing flexibly from a range of strategies.
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