Units of Study

	Grade 4 Mathematics
Unit 1	**Algebraic Thinking: Real-World Addition & Subtraction of MultiDigit #s** **(24 days) August 23-September 17th ISM Sept. 20th**
Unit 2	**Algebraic Thinking: Real-World Problems with Multiplicative and Additive Comparisons** **(23 days) September 21- October 19th ISM Oct. 20th**
Unit 3	**Computation: Division** **(17 days) October 21st- November 12th ISM November .15th**
Unit 4	**Number Sense: Fraction Equivalence and Comparison** **(19 days) November 16th- December 15th ISM December 16th**
Unit 5	**C/NS/AT: Addition and Subtraction of Fractions, Decimal Equivalents and Mixed Numbers** **(24 days) December 17th- January 31st ISM February 1st**
Unit 6	**Measurement: Area and Perimeter** **(5 days)February 2nd- February 8th ISM February 9th**
Unit 7	**Geometry: Rays, Angles, and Lines within 2-D figures** **(23 days) February10 th- March 16th ISM March 16th**
Unit 8	**Measurement: Units of Measurement** **(15days) March 17th- April 14th ISM April 15th**
Unit 9	**Data Analysis: Interpreting Data** **(12 days) April 16th- May 2 ISM May 3rd**

Green: Priority Standards   **Pink**: Supporting Standards
Grey: Additional Standards   **Orange**: Standards Not in Grade Level

			Units								
			1	2	3	4	5	6	7	8	9
Standards	NS	1	X								
		2	X								
		3				X					
		4				X(5)					
		5				X					
		6					X				
		7					X(NS6)				
		8			X						
		9	X								
	C	1	X								
		2		X							
		3			X						
		4		X							
		5					X(C6)				
		6					X				
		7		X							
	AT	1	X								
		2		X							
		3		X							
		4		X							
		5					X				

		1	2	3	4	5	6	7	8	9
	6	X								
G	1							X		
	2							X		
	3							X		
	4							X		
	5							X		
M	1								X	
	2								X	
	3								X	
	4						X			
	5							X		
	6							X		
DA	1									X
	2									X
	3									X

Unit 1-   Algebraic Thinking: Real-World Addition & Subtraction of Multi-Digit #'s

General Description of the Unit
● Place Value ● Comparing Numbers ● Adding and Subtracting Multi-Digit Numbers ● Solve Real World Problems involving these concepts

Priority Standards	Supporting Standards
● **4.AT.1** Solve real-world problems involving addition and subtraction of multi-digit whole numbers (e.g., by using drawings and equations with a symbol for the unknown number to represent the problem).	● **4.C.1** Add and subtract multi-digit whole numbers fluently using a standard algorithmic approach. ● **4.NS.1** Read and write whole numbers up to 1,000,000. Use words, models, standard form and expanded form to represent and show equivalent forms of whole numbers up to 1,000,000. ● **4.NS.2** Compare two whole numbers up to 1,000,000 using >, =, and < symbols. ● **4.NS.9** Use place value understanding to round multi-digit whole numbers to any given place value. ● **4.AT.6** Describe a relationship between two variables and use to find a second number when a first number is given. Generate a number pattern that follows a given rule.
Proficiency Scales 4.AT.1	**Tiered Assessments** 4.AT.1

Enduring Understandings	Essential Questions
- The digits in a number represent different place-values. - Numbers can be rounded to help us estimate and determine reasonableness of computations. - There is a time for estimation and precision in math. - Adding and subtracting are essential skills that are necessary to be successful in 21st century workforces. - There are a variety of methods to demonstrate how to add or subtract. - Adding and subtracting fluently does not necessarily mean adding and subtracting quickly. It means being able to approach problems with the flexibility of working for a solution in a variety of ways.	- Why is it important to understand and use place-value? - What is a real-world example of 824,567? What is an example that makes this number seem small? What is an example that makes this number seem big? What would it be impossible to represent with 824,567? What would it be reasonable to represent with 824,567? - How many specific examples can you identify in the real-world in which you would choose to round numbers? - How are addition and subtraction related to one another? - Can you think of a real-world problem to represent the addition problem 864 + 78 = __ ? Can you think of a real-world problem to represent the problem 364 - __ = 56?

Key Concepts	Related Concepts	Assessment Vocabulary
- I can use drawings to solve real-world problems that involve adding or subtracting multi-digit whole numbers. - I can use equations that include a variable to solve real-world addition and subtraction problems of multi-digit whole numbers.	- I can fluently add multi-digit whole numbers using a standard algorithm. - I can fluently subtract multi-digit whole numbers using a standard algorithm. - I can create a number pattern that follows a given rule. - I can show that an equation with two variables is a rule that describes	- Variable - Equation - Algorithm - Number pattern - Word form - Standard form - Expanded form - Equivalent - Compare - Greater than - Less than

	the relationship between the variables. ● When given one variable in a two-variable equation, I can solve the equation for the second variable. ● I can read and write numbers written in both standard and word form up to 1,000,000. ● I can represent whole numbers to 1,000,000 in standard, word, and expanded form, and by using models. ● I can show numbers as equivalent in standard, word, and expanded form. ● I can compare numbers up to 1,000,000 using greater than, less than, and equal to symbols. ● I can round whole numbers to any given place value.	● Equal ● Whole number ● Round ● Place value

Mathematical Processes
- PS.1: Make sense of problems and persevere in solving them.
- PS.2: Reason abstractly and quantitatively.
- PS.4: Model with mathematics.

Employability Skills
- **3-5.WE.5** Demonstrate perseverance to complete tasks and activities.
- **3-5.WE.3** Apply understanding of independence to complete tasks.
- **3-5.LS.12** Complete activities and assignments by following directions closely.

SEL Indicators

Resources

Textbook	**Digital**	**Manipulatives**
iReady BOY Diagnostic **Aug. 23- September 3** **Ready Math Lesson 0** **Aug. 16-20(5days)** **4.AT.1 and 4.C.1** **Ready Math Lesson 3** **Aug. 23-27 (5 days)** **4.NS.1** **Ready Math Lesson 1** **Aug. 30- Sept.2 (4 days)** **4.NS.2** **Ready Math Lesson 2** **Sept.3- 9(4 days)** **4.NS.9** **Ready Math Lesson 4** **Sept. 10-15 (4 days)** **4.AT.6** **Ready Math Lesson 8 Sept. 16-17** **(5/0 days)**	**VIDEOS** **1)** **"Adding 3 numbers using Place Value"** **2)** **"Adding 3 numbers Using Place Value (regrouping)"** **3)** **Models for Addition and Subtraction Video 1** **4)** **Models for Addition and Subtraction Video 2** **5)** **Comparing Numbers (>,<,=) Introduction** **GAMES** **6)** **Online list of Place Value Activities/Games** **I-Ready Math _Online Instruction_ Lessons** 4.AT.1/4.C.1 **Add and subtract within 1000, Part 1 (Mid 3)** **Add and Subtract within 1000, Part 2 (Mid 3)** Practice:Use Place Value to Add within 1000 (Mid 3) Practice:Use Place Value to Subtract within 1000 (Mid 3) **Subtract Whole Numbers (Early 4)** **Practice: Subtract Whole Numbers (Early 4)** 4.NS.1 **Understand Place Value (Early 4)** **Practice: Understand Place Value (Early 4)** **Practice: Place Value to 1,000 (Early 4)** 4.NS.2	● Base 10 blocks ● Hundreds Charts (could be laminated for reuse) ● Place Value Grid ● Dry Erase Boards + Markers ● Printable Place Value Disks (FREE download) ● CUBES Strategy Poster (FREE Download) **Virtual Manipulatives** ● Online 100s chart ● Harcourt Manipulatives/"Think Central" ● Didax Virtual Manipulatives (can be projected on Promethean) ● Glencoe Virtual Manipulatives

(Note: This standard will have at the most 1 question on ILEARN per IDOE Blueprints. Able to bring patterns in discussion in Lesson 9. Use as an intervention for 1st and 2nd levels.)	**Practice: Compare Whole Numbers (Early 4)** **4.NS.9** **Use Place Value to Round Numbers (Mid 3)** **Round Whole Numbers (Early 4)** **4.AT.6** **Understand Patterns (Late 3)** **Number and Shape Patterns (Early 4)**	
**Reflection**		
Data Analysis		**Celebrations/Changes**

Unit 2- Algebraic Thinking: Real-World Problems With Multiplicative & Additive Comparisons

General Description of the Unit
- Multiplication Fluency/Comparisons   - Commutative and Associative Properties   - Multi-Digit Multiplication (up to 4 digits x 1 digit)   - Solve Real-World Problems Involving Multiplicative Comparisons

Priority Standards	Supporting Standards
4.AT.4 Solve real-world problems with whole numbers 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. [In grade 4, division problems should not include a remainder.]	**4.AT.3** Interpret a multiplication equation as a comparison (e.g., interpret 35 = 5 × 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. **4.C.2** 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. Describe the strategy and explain the reasoning. **4.C.4** Multiply fluently within 100. **4.C.7** Show how the order in which two numbers are multiplied (commutative property) and how numbers are grouped in multiplication (associative property) will not change the product. Use these properties to show that numbers can be multiplied in any order. Understand and use the distributive property.

Proficiency Scales 4.AT.4	Tiered Assessments 4.AT.4
Enduring Understandings ● Multiplication can represent equal groups, multiplicative comparison, and repeated addition. ● Multiplication has inverse relationships with addition and division. ● When multiplying large numbers, partial products are found and utilized, and developing number sense with these partial products is imperative. ● Having strategies and quick recall of factors, multiples, and multiplication facts will create efficiency in solving multiplication problems.	**Essential Questions** ● What is multiplication? Describe all you know about multiplication and how it is used in the real world. ● Solve the problem 31 x 25 in two different ways. Which method do you prefer; why? How are your two methods related to one another? ● Consider the problem 52 x 63. What is a reasonable product; why? What is an unreasonably low product; why? What is an unreasonably high product; why? What is a reasonable real-world problem that could be represented by 52 x 63?

Key Concepts	Related Concepts	Assessment Vocabulary
● I can use drawings or symbols to help me solve real-world problems that involve multiplicative comparison. ● I can tell the difference between multiplicative comparison and additive comparison.	● I can interpret a multiplication equation as a comparison (See example in standard). ● I can represent verbal statements of multiplicative comparisons as multiplication equations. ● I can multiply two, two digit whole numbers using appropriate strategies. ● I can multiply a four digit number by a one digit number using appropriate strategies.	● Equation ● Variable ● Multiplicative Comparison ● Additive Comparison ● Product ● Factor ● Whole number ● Place value ● Multiple ● Commutative Property of Multiplication ● Associative Property of Multiplication ● Distributive Property

	● I can describe and explain my method of solving multiplication problems. ● I can select appropriate strategies to multiply numbers within 100. ● I can show that multiplying numbers in any order will produce the same product. ● I can show that grouping numbers in any order and then multiplying them will produce the same product. ● I can use and explain the distributive property.	

Mathematical Processes
- PS.2: Reason abstractly and quantitatively.
- PS.3: Construct viable arguments and critique the reasoning of others.
- PS.4: Model with mathematics.

Employability Skills
- **3-5.LS.13** Utilize effective questioning and brainstorming techniques.
- **3-5.WE.6** Begin to take steps to organize and prioritize tasks.
- **3-5.M.1** Begin to ask questions when receiving feedback.

SEL Indicators

Resources		
Textbook	**Digital** **VIDEOS**	**Manipulatives**

4.AT.4 **Ready Math Lesson 6** **(5/4 days)** **4.AT.3** **Ready Math Lesson 5A** **(3/4 days)** **4.C.2** **Ready Math Lesson 11** **(5/7 days)** **4.C.4** **Ready Math Lesson 7** **(5/5 days)** **4.C.7** **Ready Math Lesson 5B** **(5/4 days)**	1. **Blog on how to use manipulatives** 2. **Comparison Models and Multiplication** **(also shares/defines relevant vocabulary)** 3. **Comparison Video** 4. **Bar Model Tutorial Video** 5. **BLOG with multiple links** for visuals **I-Ready Math *Online Instruction* Lessons** **4.AT.3** and **4.AT.4:** **-Understand Multiplication, Part 1 (Early 3)** **-Understand Multiplication, Part 2 (Early 3)** **-Use Order and Grouping to Multiply (Early 3)** **-Solve 2-Step Word Problems (All Operations) (Late 3)** **-Multiplicative Comparison Word Probs, Part 1 (Early 4)** **-Multiplicative Comparison Word Probs, Part 2 (Early 4)** **-Multiplicative Comparison Word Probs, Part 3 (Early 4)** **4.C.2:** **Multiplication Word Problems (Early 4)** **Multiply by 1-digit Numbers, Part 1 (Mid 4)** **Multiply by 1-digit Numbers, Part 2 (mid 4)** **Multiply 2-digit #s by 2-digit #s (Mid 4)** **Practice: Multiply 2-digit numbers (Mid 4)**	-Place Value Blocks (visual grouping/skip counting/arrays) -unifix cubes -1" square tiles (Concrete "Bar" model) -dry erase boards and dry erase markers -100 chart (report covers OR laminate for reuse) Virtual Manipulatives

Reflection	
Data Analysis	**Celebrations/Changes**

Unit 3- Computation: Division

General Description of the Unit
 ● Factor Pairs and Multiples ● Relationships Between Addition-Multiplication ● Relationships Between Subtraction-Division ● Multi-Digit Division: No Remainders (up to 4-digits divided by 1-digit)

Priority Standards	Supporting Standards
● **4.C.3** 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. Describe the strategy and explain the reasoning.	● **4.AT.2** Recognize and apply the relationships between addition and multiplication, between subtraction and division, and the inverse relationship between multiplication and division to solve real-world and other mathematical problems. ● **4.NS.8** 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.
Proficiency Scales 4.C.3	**Tiered Assessments** 3.AT.3
Enduring Understandings	**Essential Questions**

● In our number system, there is a direct relationship between subtraction and division. ● There is a direct relationship between multiplication and division that can be used to work fluently between the operations. ● The relationship between factors and multiples can be used to solve for unknowns in multiplication and division problems.	● What real-life situations require you to multiply? What real-life situations require you to divide? ● What different models can be used to represent multiplication and division? Do you have a favorite model; why? ● What is a real-world problem you can think of for a 4-digit divided by 1-digit problem?

Key Concepts	**Related Concepts**	**Assessment Vocabulary**
● I can solve division problems with up to four-digit dividends and one-digit divisors that have whole number quotients and remainders. ● I can use strategies based on place value and properties of operations to solve division problems. ● I can use the relationship between multiplication and division to solve division problems. ● I can explain my strategy and method of solving division problems.	● I can use what I know about the relationship between adding and multiplying to solve real-world problems. ● I can use what I know about the relationship between subtracting and division to solve real-world problems. ● I can use what I know about the relationship between multiplication and division to solve real-world problems. ● I can find all factor pairs for whole numbers from 1-100. ● I can explain the relationship between factors and multiples. ● I can decide whether or not one number from 1-100 is a multiple of another one-digit number.	● Quotient ● Remainder ● Dividend ● Divisor ● Factor ● Factor pair ● Whole number ● Multiple

Mathematical Processes	**Employability Skills**

● PS.1: Make sense of problems and persevere in solving them. ● PS.2: Reason abstractly and quantitatively. ● PS.4: Model with mathematics.	●

SEL Indicators

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<td align="center">Textbook</td>
<td align="center">Digital</td>
<td align="center">Manipulatives</td>
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4.C.3
Ready Math Lesson 12 (5/9 days)

4.AT.2
Ready Math Lesson 9 (4 days)

Ready Math Lesson 10 (3/4 days)

4.NS.8
Ready Math Lesson 7 (5/5 days)*

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VIDEOS
1) [Division Using Place Value](#)
2) [Expanded Notation Method](#)
3) [Stacking Method of Division](#)
4) [Partial Quotient Division](#)
5) [Box Method of Long Division](#)
6) [Long Division Represented with Base 10 pictures (Visual)](#)

i-Ready Online Instruction Lessons
Division Problems with Remainders, Part 1 (Early 4)
Division Problems with Remainders, Part 2 (Early 4)
Practice: Division Word Problems with Remainders (Early 4)
Factors (Early 4)
Practice: Multiples, Factors, Prime #s (Early 4)
Divide Whole Numbers, Part 1 (Mid 4)
Divide Whole Numbers, Part 2 (Mid 4)

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[Virtual Manipulatives](#)

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	Practice: Divide Whole #s, Part 1 (Mid 4) Practice: Divide Whole #s, Part 2 (Mid 4)	

Reflection	
Data Analysis	**Celebrations/Changes**

Unit 4- Number Sense: Fraction Equivalence and Comparison

General Description of the Unit

- Equivalent Fractions
- Whole Numbers as Fractions
- Mixed Numbers and Improper Fractions
- Comparing Fractions

Priority Standards	**Supporting Standards**
- **4.NS.3** Express whole numbers as fractions and recognize fractions that are equivalent to whole numbers. Name and write mixed numbers using objects or pictures. Name and write mixed numbers as improper fractions using objects or pictures. - **4.NS.5** Compare two fractions with different numerators and different denominators (e.g., by creating common denominators or numerators, or by comparing to a benchmark, such as 0, 1/2, and 1). Recognize comparisons are valid only when the two fractions refer to the same whole. Record the results of	- **4.NS.4** Explain why a fraction, a/b, is equivalent to a fraction, (n × a)/(n × 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. [In grade 4, limit denominators of fractions to 2, 3, 4, 5, 6, 8, 10, 25, 100.]

comparisons with symbols >, =, or <, and justify the conclusions (e.g., by using a visual fraction model).	
Proficiency Scales 4.NS.3 4.NS.5	**Tiered Assessments** 4.NS.3 ==4.NS.5==
Enduring Understandings ● Improper fractions and mixed numbers are related and representations can be converted between to simplify computations. ● All fractions can be compared using multiple strategies based in number sense. ● Equivalent fractions represent the same fractional amount with different numbers, and can be useful in fraction comparisons and computations.	**Essential Questions** ● How are mixed numbers and improper fractions the same? How are they different? When would you see each in the real world? ● Fast food chains conducted customer research to figure out why quarter-pound burgers were selling more than third-pound burgers even though taste and price were not factors. Why do you think this may have been the case? How would you convince a customer which burger they should buy? (Related Article) ● What is the purpose of finding equivalent fractions? What is a real-world example of how an equivalent fraction would be helpful in some way?

Key Concepts	**Related Concepts**	**Assessment Vocabulary**
● I can express whole numbers as fractions. ● I can use objects and pictures to name and write mixed numbers. ● I can recognize fractions equivalent to whole numbers.	● I can use visual fraction models to explain why one fraction is equivalent to another. ● I can show that even though the number and size of the parts of two fractions may differ, the fractions themselves are the same size.	● Fractions ● Whole number ● Mixed number ● Improper fraction ● Numerator ● Denominator ● Benchmark ● Common denominator

● I can use objects and pictures to name and write mixed numbers as improper fractions. ● I can explain that comparing 2 fractions must refer to the same whole. ● I can compare 2 fractions by reasoning about their size. *I can compare 2 fractions by creating equivalent fractions with a common denominator. ● I can order fractions using <, >, and = and justify the comparison.	● I can generate and recognize equivalent fractions.	● Unlike fractions ● Greater than ● Less than ● Equal ● Equivalent fractions

Mathematical Processes

- PS.2: Reason abstractly and quantitatively.
- PS.7: Look for and make use of structure.
- PS.8: Look for and express regularity in repeated reasoning.

Employability Skills

- **3-5.LS.12** Complete activities and assignments by following directions closely.

- **3-5.WE.5** Demonstrate perseverance to complete tasks and activities.

- **3-5.WE.4** Complete tasks or activities with prompting and guidance from adult educators.

SEL Indicators

Resources		
Textbook	**Digital**	**Manipulatives**

4.NS.3 **Ready Math Lesson 13B (5/8 days)** **4.NS.5** **Ready Math Lesson 14 (5/7 days)** **4.NS.4** **Ready Math Lesson 13A (5/8 days)** **Ready Math Lesson 20 (4/4 days)**	VIDEOS 1) Compare Fractions using Benchmarks 2) Creating Common Denominators to Compare Fractions 3) Cross Multiplication to Compare (and WHY it works) 4) Equivalent Fractions (visual, then using X) 5) Improper Fractions to Mixed Numbers 6) Improper Fractions/Mixed Numbers on a # Line 7) Visual of Improper Fractions to Mixed Numbers **i-Ready Online Instruction Lessons** **Find Equivalent Fractions (Late 3)** **Understand Comparing Fractions (Late 3)** **Understand Fractions on a # Line (Late 3)** **Equivalent Fractions (Late 4)** **Compare Fractions (Late 4)** **Understand Mixed Numbers (Late 4)**	**Virtual Manipualtives**
Reflection		
Data Analysis		**Celebrations/Changes**

Unit 5- C/NS/AT: Addition & Subtraction of Fractions, Decimal Equivalents & Mixed Numbers

General Description of the Unit	
● Add and Subtract Fractions with Common Denominators ● Add and Subtract Mixed Numbers with Common Denominators ● Tenths and Hundredths in Decimal and Fraction Notations/Compare ● Solve Real-World Problems Involving Adding and Subtracting Fractions	
Priority Standards ● **4.C.6** Add and subtract mixed numbers with common 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). ● **4.NS.6** Write tenths and hundredths in decimal and fraction notations. Use words, models, standard form and expanded form to represent decimal numbers to hundredths. Know the fraction and decimal equivalents for halves and fourths (e.g., 1/2 = 0.5 = 0.50, 7/4 = 1 3/4 = 1.75). ● **4.AT.5** Solve real-world problems involving addition and subtraction of fractions referring to the same whole and having common denominators (e.g., by using visual fraction models and equations to represent the problem).	**Supporting Standards** ● **4.C.5** Add and subtract fractions with common denominators. Decompose a fraction into a sum of fractions with common denominators. Understand addition and subtraction of fractions as combining and separating parts referring to the same whole. ● **4.NS.7** Compare two decimals to hundredths by reasoning about their size based on the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions (e.g., by using a visual model).
Proficiency Scales 4.C.6 4.NS.6	**Tiered Assessments -** 4.C.6 4.NS.6

4.AT.5	4.AT.5
Enduring Understandings ● Addition and subtraction of fractions involves combining and separating parts referring to the same whole. ● Visual models, and number lines can be used to represent addition and subtraction with fractions. ● Decomposing fractions into a sum of fractions with common denominators relates directly to showing whole numbers in expanded form. ● In the base-ten number system, the first two decimal place-values represent tenths and hundredths of a whole. ● Decimals and fractions are related and conversions between the two representations can simplify computations and comparisons. ● Decimals can be compared using similar strategies as whole numbers.	**Essential Questions** ● How many different tools or models can you use to represent adding and subtracting with fractions? ● In your own words describe what it means to add or subtract fractions with like denominators? ● In the real-world, provide an example when ¼ of something is a very large amount? In the real-world, provide an example when ¼ of something is a very small amount? ● How are pennies and dimes related to tenths and hundredths? How could you use money to explain comparing decimals to someone? ● Why is it useful to be able to convert between fractions and decimals? Which do you prefer using; why? What is a real-world example of when it would be easier to use fractions and when it would be easier to use decimals? ● How are quarters related to decimals and fractions? Why is it useful to know these comparisons?

Key Concepts	Related Concepts	Assessment Vocabulary
● I can add and subtract mixed numbers with common denominators. ● I can use properties of operations to add and subtract mixed numbers with common denominators.	● I can add fractions that have common denominators. ● I can subtract fractions that have common denominators. ● I can decompose a fraction into a sum of fractions having common denominators.	● Common denominator ● Denominator ● Numerator ● Equivalent fraction ● Standard form ● Word form ● Equivalent

● I can add and subtract mixed numbers with common denominators by replacing the mixed numbers with equivalent fractions. ● I use the relationship between addition and subtraction to add and subtract mixed numbers with common denominators. ● I can write tenths and hundredths as fractions and decimals. ● I can show decimals to the hundredths place in word form, expanded form, and standard form. ● I can use models to represent decimals to the hundredths. ● I can recall fraction and decimal equivalents for halves and fourths. ● I can use fraction models and equations to add fractions with common denominators in real-world problems. ● I can use fraction models and equations to help me subtract fractions with common denominators in real-world problems.	● I can show that when I add or subtract fractions, I am actually combining or taking apart pieces of a whole. ● I can compare two decimals to the hundredths place by reasoning about their size based on same whole. ● I can compare two decimals using <, >, and =, and can justify my comparison.	● Decompose ● Greater than ● Less than ● Equal ● Compare
Mathematical Processes		**Employability Skills**

● PS.2: Reason abstractly and quantitatively. ● PS.7: Look for and make use of structure. ● PS.8: Look for and express regularity in repeated reasoning.	● **3-5.WE.4** Complete tasks or activities with prompting and guidance from adult educators. ● **3-5.WE.5** Demonstrate perseverance to complete tasks and activities. ● **3-5.WE.7** Begin to understand coping strategies to deal with expected and unexpected change.

SEL Indicators

Resources		

Textbook	**Digital** **VIDEOS**	**Manipulatives**
4.C.6 **Ready Math Lesson 17 (6/7 days)** **4.NS.6** **Ready Math Lesson 21 (5/5 days)** **4.AT.5** **Ready Math Lessons 16 (5/6 days)**	1) Tenths and Hundredths Visual 2) Adding Fractions (Like Denominators) 3) Subtracting Fractions 4) Adding Mixed Numbers-Khan Academy 5) Mixed Number Addition with Regrouping 6) Subtracting Mixed Numbers 7) Subtracting Mixed Numbers using a # Line (counting UP)	**Virtual Manipulatives**

4.C.5 **Ready Math Lesson 15 (3/1 days)** **January 19th-- January 21st** **4.NS.7** **Math Lesson Lesson 22 (5/4 days)**	**i-Ready Online Instruction Lessons** **Fractions as Tenths & Hundredths (Late 4)** **Understand Adding & Subtracting Fractions (Late 4)** **Add & Subtract Fractions (Late 4)**	

Reflection	
Data Analysis	**Celebrations/Changes**

Unit 6- Measurement: Area & Perimeter

General Description of the Unit	
• Area • Perimeter • Solve Real-World Problems Involving Area and Perimeter	

Priority Standards	Supporting Standards
• **4.M.4** Apply the area and perimeter formulas for rectangles to solve real-world problems and other mathematical problems. Recognize area as additive and find the area of complex shapes composed of rectangles by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts; apply this technique to solve real-world problems and other mathematical problems.	•

Proficiency Scales	Tiered Assessments
4.M.4	4.M.4

Enduring Understandings	Essential Questions
• Perimeter represents the outside measurement of a shape. • Area represents the inside measurement of square units of a shape. • Shapes can be decomposed into smaller shapes to calculate area and perimeter.	• How can you describe the size and shape of your bedroom to someone who has never seen it? Our classroom? The school? • How are perimeter and area related to one another? How are they different? Give as many real-world examples of perimeter and area as you can think of. • Do you think it is more useful to be able to find the perimeter or area of a space? Why?

Key Concepts	Related Concepts	Assessment Vocabulary
● I can solve real-world problems by applying the area and perimeter formulas for rectangles. ● I can explain that the area of a rectangle is additive. ● I can find the area of complex shapes by decomposing them into smaller rectangles, finding their area, and then adding them back together to solve real- real world problems.	●	● Area ● Perimeter ● Complex shape

Mathematical Processes	Employability Skills
● PS.1: Make sense of problems and persevere in solving them. ● PS.5: Use appropriate tools strategically. ● PS.6: Attend to precision.	● **3-5.WE.9** Display a variety of skills needed for school, personal, and professional situations. ● **3-5.LS.13** Utilize effective questioning and brainstorming techniques. ● **3-5.WE.3** Apply understanding of independence to complete tasks.

SEL Indicators

Resources		
Textbook	**Digital** **VIDEOS**	**Manipulatives**

4.M.4 **Ready Math Lesson 26 (5/5 days)**	1) Perimeter for Kids 2) Area for Kids 3) Finding Area and Perimeter 4) Area of Irregular Polygons 5) Find Missing Side when given the Perimeter 6) Perimeter Word Problems 7) Math Antics-Area **i-Ready Online Instruction Lessons** **Understand Area (Late 3)** **Add and Multiply to Find Area (Late 3)** **Connect Area and Perimeter (Late 3)**	**Virtual Manipulatives**
Reflection		
Data Analysis	**Celebrations/Changes**	

Unit 7- Geometry: Ray, Angles & Lines within 2-D Figures

General Description of the Unit

- Rays, Angles with Reference to Circles
- Measuring Angles in Whole Number Degrees
- Angles as Geometric Shapes
- Parallelograms, Rhombuses and Trapezoids
- Classifying Triangles and Quadrilaterals Based on Perpendicular Parallel Lines
- Symmetry

Priority Standards	Supporting Standards
● **4.G.4** Identify, describe, and draw rays, angles (right, acute, obtuse), and perpendicular and parallel lines using appropriate tools (e.g., ruler, straightedge and technology). Identify these in two-dimensional figures.	● **4.M.5** Understand that 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. Understand an angle that turns through 1/360 of a circle is called a "one-degree angle," and can be used to measure other angles. Understand an angle that turns through n one-degree angles is said to have an angle measure of n degrees. ● **4.M.6** Measure angles in whole-number degrees using appropriate tools. Sketch angles of specified measure. ● **4.G.3** Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint. ● **4.G.1** Identify, describe, and draw parallelograms, rhombuses, and trapezoids using appropriate tools (e.g., ruler, straightedge and technology).

	● **4.G.5** Classify triangles and quadrilaterals based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles (right, acute, obtuse). ● **4.G.2** Recognize and draw lines of symmetry in two-dimensional figures. Identify figures that have lines of symmetry.
Proficiency Scales **4.G.4**	**Tiered Assessments** **4.G.4**
Enduring Understandings ● While an angle is formed when two rays intersect at a single point, a polygon is formed when a minimum of three angles intersect with one another. ● Many everyday objects are formed from geometric shapes. ● Geometric shapes such as triangles, squares, rectangles, parallelograms, and rhombuses can be categorized in multiple ways.	**Essential Questions** ● How can shapes be described, compared, and combined to form other shapes? ● What geometric shapes can you identify in the classroom? In the school? In your house? In other places you see and visit throughout your life? ● What strategies can you apply to use a ruler or a straightedge? What strategies can you apply to use a compass? Can you teach one of your classmates to apply these strategies to draw polygons?

Key Concepts	**Related Concepts**	**Assessment Vocabulary**
● I can use tools and technology to draw rays, angles, perpendicular, and parallel lines. ● I can describe and identify rays, right, acute, and obtuse angles, and perpendicular and parallel lines.	● I can use tools and technology to draw parallelograms, rhombi, and trapezoids. ● I can describe and identify parallelograms, rhombi, and trapezoids.	● Ray ● Angle ● Right angle ● Acute angle ● Obtuse angle ● Parallel lines ● Ruler

● I can find rays, angles, perpendicular, and parallel lines in two-dimensional shapes.	● I can draw lines of symmetry on a two-dimensional figures. ● I can recognize a line of symmetry on a two-dimensional figure. ● I can identify figures that have lines have symmetry. ● I can show that angles are shapes which are made when two rays have the same endpoint. ● I can classify triangles as right, acute, or obtuse. ● I can classify quadrilaterals based on the presence or absence of parallel and perpendicular lines and by the presence or absence of right, acute, or obtuse angles. ● I can explain how angles are measured in reference to a circle, with the endpoint of the rays being at the center of the circle. ● I can describe one degree as the fraction 1/360 of a circle. ● I can explain the connection between degrees and angle measures. ● I can use protractors to help me accurately measure angles. ● I can draw angles with specific measures.	● Straightedge ● Perpendicular lines ● Parallelogram ● Rhombus ● Trapezoid ● Lines of symmetry ● Two-dimensional ● Symmetry ● Vertex ● Endpoint ● Triangle ● Parallel lines ● Quadrilateral ● Right triangle ● Acute triangle ● Obtuse triangle ● Equilateral triangle ● Isosceles triangle ● Scalene triangle ● Degree ● Vertex ● Protractor

Mathematical Processes	Employability Skills
- PS.5: Use appropriate tools strategically. - PS.6: Attend to precision. - PS.7: Look for and make use of structure.	**3-5.WE.6** Begin to take steps to organize and prioritize tasks. **3-5.LS.11** Complete assignments, projects, and activities with some redirection from teachers, mentors, or supervisors. **3-5.WE.5** Demonstrate perseverance to complete tasks and activities.

SEL Indicators

Resources		
Textbook	**Digital** **VIDEOS**	**Manipulatives**
4.G.4 **Ready Math Lesson 31 (5/12 days)** **4.G.3 and 4.M.5** **Ready Math Lesson 28 (3/1 days)** **4.M.6** **Ready Math Lesson 29 (5/4 days)**	1) Points, Lines and Rays Intro 2) How to Name Points, Segments, Lines, and Rays 3) Finding Right, Acute and Obtuse Angles 4) Quick Protractor Demo 5) Longer Protractor Demo 6) Intro to Symmetry 7) Classifying Triangles	**Virtual Manipulatives**

	8) Math Antics - Quadrilaterals 9) Quadrilateral Facts	
4.G.1 and 4.G.5 **Ready Math Lesson 32 (5/3 days)** **4.G.2** **Ready Math Lesson 33 (5/0 days)**	**i-Ready Online Instruction Lessons** **Identify Points, Lines, and Rays (Mid 4)** **Line Symmetry (Late 4)** **Identify Angles (Mid 4)** **Measure Angles (Late 4)** **Practice: Measure Angles (Late 4)** **Understand Categories of Shapes (Early 3)** **Classify Quadrilaterals (Early 3)** **Classify Quadrilaterals (Late 4)** **Classify Triangles (Late 4)**	

Reflection

Data Analysis	Celebrations/Changes

Unit 8- Measurement: Units of Measurement

General Description of the Unit	
● Measuring Length in Quarter-Inch, Eighth-Inch, and Millimeter ● Relative Sizes of Measurement Units: km, m, cm; kg, g; lb, oz; l, ml; hr; min, sec. (Unit Conversion) ● Solve Real-World Problems for Distance Involving the four operations	

Priority Standards	Supporting Standards
● **4.M.2** Know relative sizes of measurement units within one system of units, including km, m, cm; kg, g; lb, oz; l, ml; hr, min, sec. Express measurements in a larger unit in terms of a smaller unit within a single system of measurement. Record measurement equivalents in a two-column table.	● **4.M.1** Measure length to the nearest quarter-inch, eighth-inch, and millimeter. ● **4.M.3** Use the four operations (addition, subtraction, multiplication and division) to solve real-world problems involving distances, intervals of time, volumes, masses of objects, and money. Include addition and subtraction problems involving simple fractions and problems that require expressing measurements given in a larger unit in terms of a smaller unit.
Proficiency Scales **4.M.2**	**Tiered Assessments** **4.M.2**
Enduring Understandings ● Being able to measure precisely and accurately is imperative. ● Knowing the correct tool to measure the length of an object is just as important as understanding how to use the tool.	**Essential Questions** ● In what real-life situations is it imperative to be able to measure precisely? How many real-life situations can you list in which estimation is useful? ● What tool would you use to measure a pencil? What tool would you use to measure your height? What tool

● Measurement units are related and you can convert between different units.	would you use to measure the length of a shelf? Could you use the same tool for all three? Why would you choose to use one tool over another?

Key Concepts	**Related Concepts**	**Assessment Vocabulary**
● I can identify relative sizes of measurements within one system of units. ● I can identify the relative size of measure of km, m, cm; kg, g; lb, oz; l, ml; hr, min, sec. ● I can express measurements in a larger unit in terms of a smaller unit within the same system of measurement. ● I can record equivalent measurements in a two-column table.	● I can measure length to the nearest quarter and eighth of an inch. ● I can measure length to the nearest millimeter. ● I can use the four operations to solve real-world problems that involve distances. ● I can use the four operations to solve real-world problems that involve time intervals. ● I can use the four operations to solve real world problems that involve volume. ● I can use the four operations to solve real-world problems that involve money. ● I can solve real-world problems that involve adding and subtracting simple fractions. ● I can solve real-world problems that require converting from one unit of measure to another.	● Metric System ● System of measurement ● Table ● Intervals ● Mass ● Volume

Mathematical Processes ● PS.1: Make sense of problems and persevere in solving them. ● PS.5: Use appropriate tools strategically. ● PS.6: Attend to precision.	**Employability Skills** ● **3-5.LS.12** Complete activities and assignments by following directions closely. ● **3-5.WE.9** Display a variety of skills needed for school, personal, and professional situations. ● **3-5.WE.5** Demonstrate perseverance to complete tasks and activities.

SEL Indicators

Resources		
Textbook	**Digital** **VIDEOS**	**Manipulatives**
4.M.2 **Ready Math Lesson 23 (5/6 days)** **4.M.1 and 4.M.3** **Ready Math Lesson 25 (5/6 days)** **4.M.3** **Ready Math Lesson 24 (5/5 days)**	1) Customary Units of Length Overview 2) Convert Customary Units of Length 3) Convert Units of Time 4) Converting Customary Units of Liquid Volume 5) Metric Units Overview 6) Convert Metric Units of Mass 7) Convert Metric Units of Length 8) Convert Metric Units of Capacity 9) How to read cm, mm on a ruler 10) How to read an inch ruler	**Virtual Manipulatives**

		i-Ready Online Instruction Lessons	
		Express Measurement in Larger Units (Early 4) Solve Word Problems involving Measurement (Early 4) Practice: Convert Customary Units of Length (Early 4) Practice: Convert Customary Units of Weight (Early 4) Practice: Convert Customary Units of Liquid Volume (Early 4) Practice: Tell and Write Time (Early 3) Solve Problems about Time (Early 3) Practice: Convert Units of Time (Early 4) Practice: Convert Metric Units of Length (Early 4) Practice: Convert Metric Units of Mass (Early 4) Practice: Convert Metric Units of Liquid Volume (Early 4)	
		Reflection	
	Data Analysis		**Celebrations/Changes**

Unit 9- Data Analysis:Interpreting Data

General Description of the Unit	
● Formulating Questions that Can be Addressed with Data ● **Display** data on a Line Plot ● Observations, Surveys, and Experiments translated into a graph ● Read/Interpret Line Plots, Frequency Tables, Bar Graphs	
Priority Standards ● **4.DA.1 (EMBEDDED THROUGHOUT YEAR/EXPLICIT INSTRUCTION)*** Formulate questions that can be addressed with data. Use observations, surveys, and experiments to collect, represent, and interpret the data using tables (including frequency tables), line plots, and bar graphs.	**Supporting Standards** ● **4.DA.2** 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 data displayed in line plots. ● **4.DA.3** Interpret data displayed in a circle graph.
Proficiency Scales 4.DA.1	**Tiered Assessments** 4.DA.1
Enduring Understandings ● Data can be represented in a variety of ways depending on the needs or goals of the presenter. ● Frequency tables can help connect students to the patterns represented in an equation. ● Creating relevant, valid questions to be explored through a variety of methods is imperative for meaningful data collection.	**Essential Questions** ● To fully interpret a bar graph, circle graph, or a line plot, what key informational components are necessary? ● In what real-world scenario would you choose to represent data using a circle graph? A line plot? A bar graph? A frequency table?

Key Concepts	Related Concepts	Assessment Vocabulary
- I can create questions that can be answered using data. - I can collect data using surveys, experiments and observations. - I can use line plots, data tables and bar graphs to represent and interpret data I have collected.	- I can make a line plot that displays a data set in fractions of a unit. - I can use line plots to solve problems that involve adding and subtracting fractions. - I can interpret the data that is displayed on a circle graph.	- Survey - Line plot - Bar graph - Frequency table - Circle graph

Mathematical Processes	Employability Skills
- PS.1: Make sense of problems and persevere in solving them. - PS.2: Reason abstractly and quantitatively. - PS.3: Construct viable arguments and critique the reasoning of others.	**3-5.M.1** Begin to ask questions when receiving feedback. **3-5.M.2** Begin to discuss with peers about feedback received. **3-5.LS.13** Utilize effective questioning and brainstorming techniques.

SEL Indicators

Resources

Textbook	Digital	Manipulatives
4.DA.1 **Ready Math Unit 5 Math in Action: Use Measurements (2/0 days)**	**VIDEOS** 1) Intro: Types of Graphs 2) Creating a Line plot with Fraction Data	**Virtual Manipulatives**

4.DA.2 **Ready Math Lesson 27A (5/2 days)** **4.DA.3** **Ready Math Lesson 27B (5/2 days)**	3) [Creating a Line Plot with Whole Numbers](#) 4) [Sample: Creating a Bar Graph with Data](#) 5) [Pictograph Intro (BrainPopJr on YouTube)](#) <mark>i-Ready Online Instruction Lessons</mark> Measure Length & Plot Data on Line Plots (Late 3) Draw Scaled Picture Graphs (Mid 3) Draw Scaled Bar Graphs (Mid 3) Practice:Draw Scaled Graphs (Mid 3) Solve Problems Using Scaled Picture Graphs (Mid 3) Solve Problems Using Scaled Bar Graphs (Mid 3) Practice: Solve Problems Using Scaled Bar Graphs (Mid 3)	

Reflection	
Data Analysis	**Celebrations/Changes**