Unit Title	Are you odd or even?		Length of Unit	8 weeks
Focusing Lens(es)	Decision-making/Efficiency	**Standards and Grade Level Expectations Addressed in this Unit**	MA10-GR.2-S.1-GLE.2 MA10-GR.2-S.3-GLE.1 MA10-GR.2-S.4-GLE.1 MA10-GR.2-S.4-GLE.2	
Inquiry Questions (Engaging-Debatable):	• What is the best way (s) to add and subtract numbers? (MA10-GR.2-S.1-GLE.2-N.1) • What makes a strategy efficient?			
Unit Strands	Operations and Algebraic Thinking, Geometry, Measurement and Data, Personal Financial Literacy			
Concepts	Applications, financial decision-making, addition, sum (addends), subtraction, partitioning, odd/even, equal, word problems (adding to, taking from, putting together, taking apart, comparing), unknown, picture and bar graphs, data, fluency, properties of operations, number line diagram, whole numbers, lengths, line segments/points, differences/take-away, rectangular arrays, rows and columns, skip counting, partition, remainder, halves, equation			

Generalizations My students will **Understand** that…	Guiding Questions	
	Factual	**Conceptual**
Applications of addition and subtraction, represented in word problem contexts, involve adding to, taking from, putting together, taking apart, and comparing (MA10-GR.2-S.1-GLE.2-EO.a.i, a.ii)	What types of word problems are addition and subtraction word problems? What information do you need to solve a problem? What are strategies for learning addition and subtraction facts?	How do you know whether to use addition or subtraction to solve a problem? Why does fluency with addition and subtraction facts support success in mathematics?
Picture graphs and bar graphs represent data sets and provide means to solve addition and subtraction questions that involve put-together, take-apart, and comparison situations (MA10-GR.2-S.3-GLE.1-EO.a.iii)	What types of questions can you answer from a picture or bar graph?	How do we use information from a graph to solve problems?
A number line diagram can represent whole numbers and sums of numbers by facilitating the combination of line segments as lengths starting from 0 with equally spaced points corresponding to each whole number (MA10-GR.2-S.4-GLE.2-EO.b.ii)	How do you represent a whole number on a number line diagram? How is addition represented on a number line?	Why would you use a number line to solve addition problems?
A number line diagram can allow the computation of differences by facilitating both comparison and take away models of subtraction (MA10-GR.2-S.4-GLE.2-EO.b.ii)	What are two ways to represent subtraction on a number line?	Why would you use a number line to solve subtraction problems?

Skip counting the number in each row or the number in each column provides one way to determine the total number of objects arranged in rectangular arrays (rows and columns) (MA10-GR.2-S.1-GLE.2-EO.d.iii) and (MA10-GR.2-S.4-GLE.1-EO.c)	How can you show an equation for the total number of objects in an array?	Why is skip counting an efficient way to find the total number of objects in an array?
Even numbers halved into equal parts leave no remainders while odd numbers when split into two equal parts always leave a remainder of one (MA10-GR.2-S.1-GLE.2-EO.d.i, d.ii)	What does it mean for a number to be even? What does it mean for a number to be odd?	Why do both skip counting by two and being able to divide a number by two, with no remainder, help you determine if a number is even?

Key Knowledge and Skills: **My students will…**	*What students will know and be able to do are so closely linked in the concept-based discipline of mathematics. Therefore, in the mathematics samples what students should know and do are combined.*

- Use addition and subtraction within 100 to solve one and two step word problems involving situations of adding to taking from, putting together, taking apart and comparing with unknowns in all positions and represent the problem by using drawings and equations with a symbol for the unknown number (MA10-GR.2-S.1-GLE.2-EO.a.i) (2.CC.OA.1)
- Apply addition and subtraction concepts to financial decision making (MA10-GR.2-S.1-GLE.2-EO.a.ii) *
- Fluently add and subtract within 20 using mental strategies (MA10-GR.2-S.1-GLE.2-EO.b, c) (2.CC.OA.2)
- Determine whether a group of objects (up to 20) has an odd or even number of members (MA10-GR.2-S.1-GLE.2-EO.d.i) (2.CC.OA.3)
- Write an equation to express an even number as a sum of two equal addends (MA10-GR.2-S.1-GLE.2-EO.d.ii) (2.CC.OA.3)
- Partition a rectangle into rows and columns of same-size squares and count to find the total number of them (MA10-GR.2-S.4-GLE.1-EO.c) (2.CC.G.2)
- Use addition to find the total number of objects arranged in rectangular arrays with up to 5 row and up to 5 columns and write an equation to express the total as a sum of equal addends (MA10-GR.2-S.1-GLE.2-EO.d.iii) (2.CC.OA.4)
- Represent whole numbers a lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, . . . (MA10-GR.2-S.4-GLE.2-EO.b.ii) (2.CC.MD.6)
- Represent whole number sums and differences within 100 on a number line diagram (MA10-GR.2-S.4-GLE.2-EO.b.ii) (2.CC.MD.6)
- Draw a picture graph and bar graph (with single unit scale) to represent a data set with up to four categories (MA10-GR.2-S.3-GLE.1-EO.a.ii) (2.CC.MD.10)
- Solve simple put together, take-apart, and compare problems using information presented in picture and bar graphs (MA10-GR.2-S.3-GLE.1-EO.a.iii) (2.CC.MD.10)

*Denotes connection to Personal Financial Literacy (PFL)

Critical Language: includes the Academic and Technical vocabulary, semantics, and discourse which are particular to and necessary for accessing a given discipline. EXAMPLE: A student in Language Arts can demonstrate the ability to apply and comprehend critical language through the following statement: *"Mark Twain exposes the hypocrisy of slavery through the use of satire."*	
A student in _____ can demonstrate the ability to apply and comprehend critical language through the following statement(s):	*I know the number 18 is even because I can divide it in half with no remainder and when I skip-count by twos starting at 0 I say the number 18.*
Academic Vocabulary:	Addition, subtraction, odd, even, equal, word problems, fluency, lengths, rows, columns, halves

Technical Vocabulary:	Picture graph, bar graph, number line diagram, line segments, points, differences, take away, rectangular arrays, skip-counting, partition, remainder, equation