Unit 1 Summary

In this unit, students will:

- Deepen addition and subtraction fact strategies.
- Use place value understanding and properties of operations to add and subtract.

Duration

4 weeks

Unit Title	Subject Area
Addition and Subtraction Fact Strategies	MATH

Common Core State Standards

2.OA.B. Add and subtract within 20.
* 2.OA.B.2. Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers.

Number & Operations in Base Ten
2.NBT.A. Understand place value.
* 2.NBT.A.1. Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases:
*2.NBT.A.2. Count within 1000; skip-count by 5s, 10s, and 100s.

2.NBT.B. Use place value understanding and properties of operations to add and subtract.
* 2.NBT.B.9. Explain why addition and subtraction strategies work, using place value and the properties of operations. (Explanations may be supported by drawings or objects).

Operations & Algebraic Thinking
2.OA.A. Represent and solve problems involving addition and subtraction.

- 2.OA.A.1. Use addition and subtraction within 100 [20] 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, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.

Number & Operations in Base Ten
2.NBT.B. Use place value understanding and properties of operations to add and subtract.
2.NBT.B.5. Fluently add and subtract within 100 [20] using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.

Essential Questions/Student Targets	I Can Statements
1. How does the use of strategies help us learn addition and subtraction problems? 2. How can knowing doubles facts help you learn other facts? 3. How does knowing addition facts help you learn subtraction facts? 4. How does reasoning help us learn addition and subtraction facts? 5. How can knowing an addition or subtraction fact help us to solve a related addition or subtraction fact?	• I can create a number line with whole number intervals. • I can represent whole numbers on a number line. • I can skip-count by 5s, 10s, and 100s • I can compare two three-digit numbers based on meaning of the hundreds, tens, and ones digits, using <, >, = symbols to record results in comparison. • I can represent and explain the place value of digits of a three-digit number as hundreds, tens, and ones. • I can explain the value of zeros in a hundred, as zero tens and zero ones. • I can identify the strategy/strategies for solving word problems. • I can use addition (and/or subtraction) to solve 2 step word problems within 100. • I can add (or subtract) within 100 using strategies based on place value, properties of operation, and/or the relationship between addition and subtraction. • I can use mental strategies (e.g. count on, make ten) to add or subtract numbers within 20 with ease. – (this will be ongoing throughout the year)

Academic Vocabulary addition sum base ten comparison (greater than, less than, equal to) commutative property compose decompose equation fact family fact strategies inverse operation part-part-whole place value skip count subtraction difference	**Student Vocabulary**
Key Ideas/Learning Objectives Developing a deeper understanding of place value. Developing a deeper understanding of addition and subtraction strategies.	
Formative Assessment *Math Journals – recording strategies, solutions, reflections and explanations. *Slate work *Exit slips	**Summative Assessment** Unit 1 Assessment
Lesson Sequence EM = Everyday Mathematics 1. Introduction 2. Number Sequences (EM 1.1) 3. Number Grids (EM 1.8) 4. Relations (<, >, =) (EM 1.11) 5. Numeration & Place Value (EM 3.1) 6. Place Value (EM 10.8 & 10.9) 7. Addition Number Stories (EM 2.1) 8. Review "Easy" Addition Facts (EM 2.2) 9. Doubles Facts (EM 2.3) 10. Turn-Around Facts and the +9 Shortcut (EM 2.4) 11. Addition Strategies that Use Doubles Facts (EM 2.5) 12. Subtraction with Addition (EM 2.6)	**Resources** -Everyday Mathematics **LITERATURE:** Hong, Lily Toy.*Two of Everything*. Albert Whitman and Company. ISBN 978-0-8075-8157-5.1993. Tang, Greg. *Math-terpieces the Art of Problem-Solving.* Scholastic Press. ISBN 0-439-44388-1. 2003. Leedy, Loreen. *Subtraction Action*. Holiday House, Inc. ISBN 0-8234-1454-X.2000. Tang, Greg. *The Grapes of Math: Mind Stretching Math Riddles.* Scholastic. ISBN 0-

13. Fact Families (EM 2.7) 14. Counting Strategies for Subtraction (EM 2.12) 15. Shortcuts for "Harder" Subtraction Facts (EM 2.13) 16. M & M Math 17. Remediation, Enrichment, Practice	439-21033-X. 2001. Murphy, Stuart. *Shark Swimathon*. Harper Collins. ISBN 0-06-446735-X. 2001. Murphy, Stuart. *Earth Day-Hooray!* Harper Collins. ISBN 0-06-000129-1. 2004. **MANIPULATIVES:** Hundreds chart Number grid Base-ten blocks Number line Fact triangles

Unit 2 Summary

In this unit, students will:

- Understand place value.
- Use place value understanding and properties of operations to add and subtract.
- Represent and solve problems involving addition and subtraction.
- Tell time to the nearest 5 minutes.
- Solve money word problems.

Duration

6 weeks

Unit Title	Subject Area
Place Value, Money, and Time	MATH

Common Core State Standards

Represent and solve problems involving addition and subtraction.

- 2.OA.A.1. 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, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.

Understand place value.

- 2.NBT.A.1. Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases:
  - 2.NBT.A.1.a. 100 can be thought of as a bundle of ten tens — called a "hundred."
  - 2.NBT.A.1.b. The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).
- 2.NBT.A.2. Count within 1000; skip-count by 5s, 10s, and 100s.
- 2.NBT.A.3. Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.
- 2.NBT.A.4. Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, and < symbols to record the results of comparisons.

Use place value understanding and properties of operations to add and subtract.

- 2.NBT.B.8. Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900.
- 2.NBT.B.9. Explain why addition and subtraction strategies work, using place value and the properties of operations.
  Explanations may be supported by drawings or objects.

Measurement & Data

-Work with time and money.

- 2.MD.C.7. Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.
- 2.MD.C.8. Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately. Example: If you have 2 dimes and 3 pennies, how many cents do you have?

Essential Questions/Student Targets	I Can Statements
1. How does the value of a digit change when its position in a number changes? 2. If you had 2 quarters, 3 dimes, 2 nickels and 4 pennies, what strategies would you use to determine the value of the set of coins? Explain your strategy. 3. How do you determine whether you have enough money for what you want to buy? 4. How can you record what time it is?	• I can identify the number of steps to solve a word problem. • I can identify an unknown number in an equation using addition and subtraction up to 100. • I can represent and explain the place value of the digits of a three-digit number as hundreds, tens, and ones. • I can explain the value of zeros in a hundred as zero tens and zero ones. • I can count within 1000. • I can skip count by 5s, 10s, and 100s. • I can read and write numbers to 1000 using base-ten numerals, number names, and expanded form. • I can compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using <, >, and = symbols to record results comparisons. • I can add and subtract using place value and properties of operations. • I can mentally add and subtract 10 to a given number 100-900. • I can explain why addition and subtraction strategies work, using place value and the properties of operation. • I can use drawings or objects to support my explanations. • I can tell and write time from analog and digital clocks using the following terminology: half past, quarter after/past, quarter to, minutes after/past, and minutes to. • I can tell time to the nearest five minutes. • I can tell the difference between a.m. and p.m. • I can identify and give the value of dllar bills half dollars, quarters, dimes, nickels, and pennies. • I can use $ (dollar) and ¢ (cents) symbols appropriately. • I can solve a word problem with dollar bills, quarters, dimes, nickels, and pennies.

Academic Vocabulary	**Student Vocabulary**
analog clock digit digital clock dime half-hour hour hour hand minute hand nickel one-units quarter penny place value ten-units unit a.m. p.m.	

Key Ideas/Learning Objectives

To understand place value.
Use place value understanding and properties of operations to add and subtract.
Represent and solve problems involving addition and subtraction.
Tell time to the nearest 5 minutes.
Solve money word problems.

Formative Assessment	**Summative Assessment**
*Math Journals – recording strategies, solutions, reflections and explanations. *Slate work *Exit slips	Unit 2 Assessment

Lesson Sequence	**Resources**
EM = Everyday Mathematics **18.** Introducing the Clock (EM 3.3) **19.** Exploring the Clock (EM 5.1) **20.** Hours and a.m. and p.m. **21.** Hours and Minutes **22.** Hours and Minutes (continued) **23.** Counting Routines **24.** Introduction to Money **25.** All About Money **26.** Introduce Penny and Nickel **27.** Introduce Dime **28.** Introduce Quarter	-Everyday Mathematics **LITERATURE:** Hong, Lily Toy.*Two of Everything*. Albert Whitman and Company. ISBN 978-0-8075-8157-5.1993. Tang, Greg. *Math-terpieces the Art of Problem-Solving.* Scholastic Press. ISBN 0-439-44388-1. 2003.

29. $1.00 and Counting Coins **30.** Money to $1.00 **31.** Buying Items **32.** Combination of Coins & Fewest Coins **33.** Solving Word Problems with Money **34.** Solving Word Problems with Money (continued) **35.** Review Money	Leedy, Loreen. *Subtraction Action*. Holiday House, Inc. ISBN 0-8234-1454-X.2000. Tang, Greg. *The Grapes of Math: Mind Stretching Math Riddles.* Scholastic. ISBN 0-439-21033-X. 2001. Murphy, Stuart. *Shark Swimathon*. Harper Collins. ISBN 0-06-446735-X. 2001. Murphy, Stuart. *Earth Day-Hooray!* Harper Collins. ISBN 0-06-000129-1. 2004. **MANIPULATIVES:** Hundreds chart Number grid Base-ten blocks Number line Fact triangles

Unit 3 Summary

In this unit, students will:

- Identify shapes and their attributes and draw shapes.
- Work with common 2-dimensional shapes and with cubes as a representative of 3-dimensional shapes.
- Begin to partition shapes. They will partition rectangles into rows and columns.
- Partition rectangles and circles into 2, 3, or 4 equal shares.
- Learn that the wholes are divided into halves, thirds and fourths.

Duration

5 weeks

Unit Title	**Subject Area**
Geometric Shapes (2-D and 3-D)	MATH

Common Core State Standards

Geometry

- Reason with shapes and their attributes

- 2.G.A.1 Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.

  Sizes are compared directly or visually, not compared by measuring.

- 2.G.A.2 Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.
- 2.G.A.3 Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.

Essential Questions/Student Targets	**I Can Statements**
1. What are the properties of shapes? 2. How does knowing about 2-dimensional shapes help you understand 3-dimensional shapes? 3. How are 2-dimensional shapes and 3-dimensional shapes alike? How are 2-dimensional shapes and 3-dimensional shapes different? 4. Must equal shares of identical wholes have the same shape? Explain.	• I can identify the attributes (sides, faces, angles) to describe shapes (triangles, quadrilaterals, pentagons, hexagons, and cubes). • I can draw a shape when told its attributes. • I can draw rows and columns of equal size in a rectangle. • I can divide circles and rectangles into two, three, or four equal shares, describe the parts using words like halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths. • I can explain and give examples to show that halves, thirds, and fourths of an identical whole do not need to be the same shape.

Academic Vocabulary	**Student Vocabulary**
2-dimensional shapes 3-dimensional shapes attributes of shapes equal shares fourths halves partitioning shapes relationship between 2- and 3-dimensional figures thirds whole	

Key Ideas/Learning Objectives

- Identify shapes and their attributes and draw shapes.
- Work with common 2-dimensional shapes and with cubes as a representative of 3-dimensional shapes.
- Begin to partition shapes. They will partition rectangles into rows and columns.
- Partition rectangles and circles into 2, 3, or 4 equal shares.
- Learn that the wholes are divided into halves, thirds and fourths.

Formative Assessment	**Summative Assessment**
*Math Journals – recording strategies, solutions, reflections and explanations. *Slate work *Exit slips	Unit 3 Assessment

Lesson Sequence	**Resources**
EM = Everyday Mathematics **36.** Introduction to 2-D Shapes **37.** 2-Dimensional Shapes **38.** 2-Dimensional Shapes **39.** 2-Dimensional Shapes	-Everyday Mathematics -Teachers Pay Teachers

40. 2-Dimensional Shapes **41.** 3-Dimensional Shapes **42.** 3-Dimensional Shapes **43.** 3-Dimensional Shapes **44.** 3-Dimensional Shapes **45.** 3-Dimensional Shapes **46.** 3-Dimensional Shapes **47.** 3-Dimensional Shapes **48.** 2-D and 3-D **49.** 2-D and 3-D **50.** Assessment for 2-D and 3-D **51.** Sharing Equally **52.** Pizza Fractions (2 days) **53.** Grandmas' Quilts (Partitioning rectangles) **54.** Chocolate Bar Math **55.** Rectangle Riddles **56.** Making a Cake **57.** My Country's Flag **58.** Fraction Review **59.** Fractions Assessment	**LITERATURE:** *The Greedy Triangle* by Marilyn Burns *Grandfather Tang's* Story, by Ann Tompert **MANIPULATIVES:** Marshmallows Toothpicks Wooden 3-D shapes Pattern block template Pattern blocks

Unit 4 Summary	
In this unit students add and subtract within 100, applying an understanding of place value, the properties of operations, and the inverse relationship between addition and subtraction.	
Duration 7 weeks	
Unit Title Addition and Subtraction Strategies and Algorithms	**Subject Area** MATH

Common Core State Standards

Operations & Algebraic Thinking

- Represent and solve problems involving addition and subtraction.

- 2.OA.1. 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, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.

-Add and subtract within 20.

- 2.OA.2. Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers.
  See standard 1.OA.6 for a list of mental strategies.

-Work with equal groups of objects to gain foundations for multiplication.

- 2.OA.3. Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2s; write an equation to express an even number as a sum of two equal addends.
- 2.OA.4. Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.

Number & Operations in Base Ten

-Understand place value.

- 2.NBT.1. Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases:
  - 2.NBT.1.a. 100 can be thought of as a bundle of ten tens — called a "hundred."
- 2.NBT.2. Count within 1000; skip-count by 5s, 10s, and 100s.

-Use place value understanding and properties of operations to add and subtract.

- 2.NBT.5. Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.
- 2.NBT.6. Add up to four two-digit numbers using strategies based on place value and properties of operations.
- 2.NBT.9. Explain why addition and subtraction strategies work, using place value and the properties of operations.

Explanations may be supported by drawings or objects.

Essential Questions/Student Targets	I Can Statements
1. How can you use what you know about addition to help you subtract? 2. How can you decide if an answer makes sense? 3. Why is it important to "invent" your own strategies for solving word problems? 4. Why is it important to explain your thinking? 5. How can you use an addition or subtraction problem you already know to solve a related problem?	• I can identify the number of steps to solve a word problem. • I can identify an unknown number in an equation using addition and subtraction up to 100. • I can identify the strategy/strategies used for solving word problems. • I can use addition and/or subtraction to solve 2 step word problems within 100. • I can use mental strategies (e.g. count on, make a ten) to add or subtract numbers within 20 with ease. • I can recall from memory all sums of two one-digit (0-9) numbers. • I can identify a group of objects as being even or odd using different strategies. • I can write an equation to show an even sum has the same addends (e.g.5+5=10, 6+6=12). • I can use addition to find the total number of objects in an array. • I can write an addition equation (e.g. 3+3+3=9) to express the total as a sum of equal addends. • I can represent the total number of objects arranged in a rectangular array as an expression with the repeated addition of number of objects. • I can represent and explain the place value of the digits of a three-digit number as hundreds, tens, and ones. • I can explain the value of zeros in a hundred as zero tens and zero ones. • I can count within 1000. • I can skip-county by 5s, 10s, and 100s.

	• I can add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. • I can add up to four two-digit numbers using strategies like rearranging or making tens depending on the numbers being added. • I can explain why addition and subtraction strategies work, using place value and the properties of operations. • I can use drawings or objects to support my explanations.

Academic Vocabulary	**Student Vocabulary**
addend associative commutative compose/decompose difference digit equation inverse relationship solution strategy sum unknown	

Key Ideas/Learning Objectives

-Represent and solve problems involving addition and subtraction.
-Add and subtract within 20.
-Work with equal groups of objects to gain foundations for multiplication.
-Understand place value.
-Use place value understanding and properties of operations to add and subtract.

Formative Assessment

*Math Journals – recording strategies, solutions, reflections and explanations.
*Slate work
*Exit slips

Summative Assessment

Unit 4 Assessment

Lesson Sequence

EM = Everyday Mathematics

1. Addition Number Stories (EM 2.1)
2. Review "Easy" Addition Facts (EM 2.2)
3. Doubles Facts (EM 2.3)
4. Turn-Around Facts and the +9 Shortcut (EM 2.4)
5. Addition Strategies that Use Doubles Facts (EM 2.5)
6. Subtraction from Addition (EM 2.6)
7. Fact Families (EM 2.7)
8. Counting Strategies for Subtraction (EM 2.12)
9. Shortcuts for "Harder" Subtraction Facts (EM 2.13)
10. Numeration & Place Value (EM 3.1)
11. Change-to-More Number Stories (EM 4.1)
12. Parts-and-Total Number Stories (EM 4.2)
13. Temperature Change (EM 4.4)
14. Paper-and-Pencil Addition Strategies (EM 4.8)
15. The Partial-Sums Algorithm (EM 4.9)
16. Comparison Number Stories (EM 6.2)
17. Mixed Addition and Subtraction Stories (EM 6.4)
18. Subtraction Strategies (EM 6.5)
19. Multiples of Equal Groups (EM 6.7)
20. Array Number Stories (EM 6.8)
21. Multiplication with Arrays (REPEATED ADDITION) (EM 6.9)
22. Extending Complements of 10 (EM 7.2)
23. Mental Arithmetic (EM 7.3)
24. Place Value (EM 10.8)

Resources

-Everyday Mathematics
-Teachers Pay Teachers

LITERATURE:

Chalmers, Mary. (1986). *Six Dogs, 23 Cats, 45 Mice, and 116 Spiders*. Harpercollins Childrens Books

Cristaldi, Kathryn. (1996). *Even Steven and Odd Todd.* Cartwheel Publishers

Giganti, Paul (1999). *Each Orange Had 8 Slices.* Greenwillow Books, Publishers

Hong, Lily Toy. (1993). *Two of Everything.* Albert Whitman and Company, Publishers

Murphy, Stuart J. (2006) ***Mall Mania.*** HarperCollins Publisher

Ringgold, Faith. (1991). *Tar Beach.* Crown Books for Young Readers, Publishers

MANIPULATIVES:

- Base-ten blocks
- Hundred chart
- Number lines

25. Place Value Tools (EM 10.9) 26. The Trade-First Subtraction Algorithm (EM 11.3) 27. U.S. Traditional Addition (EM Project 1 – pg. A1) 28. U.S. Traditional Subtraction (EM Project 2 – pg. A6) 29. Extra 30. Extra 31. Extra 32. Extra 33. Extra 34. Review 35. Assessment	

Unit 5 Summary

In this unit, students will:

- be introduced to standard linear measurement, inches and feet, centimeters and meters. They build an understanding of the relationship between two units of measure by first estimating, then measuring, the length of the same object with different length units (e.g., inches and centimeters) and explaining how the measurements relate to the units used to measure the object.
- use standard units to express the difference between the lengths of two objects. Students solve word problem involving linear measurement that includes adding and subtracting within 100, modeling problems on a number line and representing problems with both drawings and equations. They display linear measurement data on line plots, picture graphs and bar graphs and use that data to solve problems.
- Organize and represent data

Duration

6 weeks

Unit Title	**Subject Area**
Measurement and Data	MATH

Common Core State Standards

Measurement & Data

Measure and estimate lengths in standard units.

- 2.MD.1. Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.
- 2.MD.2. Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.
- 2.MD.3. Estimate lengths using units of inches, feet, centimeters, and meters.
- 2.MD.4. Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.

Relate addition and subtraction to length.

- 2.MD.5. Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.
- 2.MD.6. Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, …, and represent whole-number sums and differences within 100 on a number line diagram.

Represent and interpret data.

- 2.MD.9. Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units.
- 2.MD.10. Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems1 using information presented in a bar graph.

Essential Questions/Student Targets	I Can Statements
1. How is the space between the lines on a ruler the measure of length? 2. How does the size of the unit affect the length measure of an object? 3. How are units of measurement related? 4. How is estimation helpful in measurement? 5. How can students use a variety of tools (e.g., number lines and	• I can select and use appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes to measure the length of an object. • I can measure the length of an object twice, using length units for the two different measurements. • I can describe how the two measurements relate to the size of the unit chosen.

graphs) to represent linear measurement data and solve given problems? 6. Where do questions for collecting data come from? 7. How can I collect the information I need to answer the questions? 8. How do graphs and charts help us answer questions? 9. How can I organize data I collect? 10. How can I display data I get from a data collection? 11. What questions can I ask and answer about the data displayed in my chart or graph?	• I can estimate lengths using units of inches, feet, centimeters, and meters. • I can measure to determine how much longer one object is than the other. • I can express the length difference in terms of a standard length unit. • I can add and subtract lengths of the same unit within 100. • I can solve word problems involving lengths that are given in the same units. • I can use drawings and equations with a symbol for the unknown number to represent the problem. • I can create a number line with whole number intervals. • I can represent whole numbers on a number line. • I can find sums and differences within 100 using a number line. • I can measure and record the lengths of several objects to the nearest whole number. • I can create a line plot with a horizontal scale marked off in whole number units. • I can record length measurements on a line plot. • I can solve problems with data in graphs by using addition and subtraction. • I can make comparisons between categories in the graph using more than, less than, etc. with up to four sets of data. • I can draw a picture or bar graph to represent a given set of data with up to four categories.

Academic Vocabulary	Student Vocabulary
bar graph compare equations representing data estimate interpreting data line plot measure number line diagram picture graph representing data standard linear measures question investigate data collect organize sort classify category represent interpret less than more than most least different same column survey combine compare draw conclusions range precise	

Key Ideas/Learning Objectives

- Measure and estimate lengths in standard units.
- Relate addition and subtraction to length.
- Represent and interpret data.

Formative Assessment	**Summative Assessment**
*Math Journals – recording strategies, solutions, reflections and explanations. *Slate work *Exit slips	Unit 5 Assessment
Lesson Sequence 1. Introduction 2. Measuring Attributes 3. Exploring Length 4. Non-Standard Units Scavenger Hunt 5. Moving from Non-Standard to Standard Part 1 6. Moving from Non-Standard to Standard Part 2 7. Moving from Non-Standard to Standard Part 3 8. US Standard Units (Inches, Feet, Yards) 9. Measuring Paths 10. Metric System – Centimeters and Meters 11. Measuring Objects with Two Units 12. Length Differences in Objects 13. Choosing Tools and Units of Measurement 14. Solving Measurement Word Problems 15. Line Plots – Day 1 16. Line Plots – Day 2 17. Picture Graphs 18. Bar Graphs 19. Gathering Graph Information 20. Picture Graphs 21. Bar Graphs	**Resources** -Teachers Pay Teachers **LITERATURE:** *Jim and the Beanstalk* by Raymond Briggs *Measuring Penny* by Loreen Leedy *Inch by Inch* by Leo Lionni *How Big is a Foot?* By Rolf Myller **MANIPULATIVES:** Rulers Yardsticks Metersticks

22.Making Your Own Graph 23.Review Data 24.Basketball Graphing 25.Basketball Graphing 26.Review 27.Assessment	