

RSU 54/MSAD 54 Math Curriculum

Content Area: Math
Unit: Operations and Algebraic Thinking

Grade: Grade 1

Common Core State Standards Domain: Operations and Algebraic Thinking

Common Core State Standards	RSU 54/MSAD 54 Objectives	Instructional Resources/Activities
<p>Represent and solve problems involving addition and subtraction.</p> <p>1. Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.¹</p> <p>2. Solve addition problems that call for addition of three</p>	<p>Represent and solve problems involving addition and subtraction.</p> <p>1a. Solve problems involving addition and subtraction of whole numbers up to 20.</p> <p>1b. Solve addition and subtraction word problems through the use of stories and modeling. Solve each of the problem types (adding to, taking from, putting together, taking apart, and comparing with unknowns in all positions).</p> <p>1c. Explain strategies and solutions for solving word problems.</p> <p>1d. Model situations represented in word problems.</p> <p>2a. Solve addition problems with three whole numbers whose sum is less than or equal</p>	<p>1a. <u>Scott Foresman</u> Chapters 3, 4 & 11 1a. <u>Navigating through Numbers and Operation PK-2 Park Your Car</u> pp. 49-51 1a. <u>Zeroing In Join and Separate</u></p> <p>1b. <u>Scott Foresman</u> Chapters 3, 4 & 11 1b. <u>Navigating through Numbers and Operation PK-2 Park Your Car</u> pp. 49-51 1b. <u>Zeroing In Join and Separate</u></p> <p>1c. <u>Scott Foresman</u> Chapters 3, 4 & 11 1c. <u>Zeroing In Join and Separate</u> 1c. <u>Navigating through Numbers and Operation PK-2 Park Your Car</u> pp. 49-51</p> <p>1d. <u>Scott Foresman</u> Chapters 3, 4 & 11 1d. <u>Navigating through Numbers and Operation PK-2 Park Your Car</u> pp. 49-51 1d. <u>Zeroing In Join and Separate</u></p> <p>Additional Resources for 1a-1d: -Connie Clark's problem solving books -<u>Number Sense Routines</u> Ch. 7 (to enhance class discussions)</p> <p>2a. <u>Scott Foresman</u> Chapter 11 sect A activity 11-6 2a. <u>Zeroing In What do you see?</u></p>

<p>whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.</p> <p>¹. See Glossary, Table 1</p> <p>Understand and apply properties of operations and the relationship between addition and subtraction.</p> <p>3. Apply properties of operations as strategies to add and subtract.² <i>Examples: If $8+3=11$ is known, then $3+8=11$ is also known. (Commutative property of addition.) To add $2+6+4$, the second two numbers can be added to make a ten, so $2+6+4=2+10=12$. (Associative property of addition.)</i></p> <p>4. Understand subtraction as an unknown-addend problem. <i>For example, subtract $10-8$ by finding the number that makes 10 when added to 8.</i></p>	<p>to 20.</p> <p>Understand and apply properties of operations and the relationship between addition and subtraction.</p> <p>3a. Know that the order of addends doesn't affect the sum, and apply that fact to computation (e.g., $2+9 = 9+2$).</p> <p>3b. Identify fact families for addition and subtraction facts.</p> <p>3c. Know that the order of combining numbers in a number sentence doesn't affect the sum, and apply that fact to computations (e.g. $5+5+4 = 10+4$).</p> <p>4a. Solve subtraction problems as unknown addend problems.</p>	<p>3a. <u>Scott Foresman</u> Chapter. 3 sect A 3a. <u>Zeroing In</u> Linking Addition and Subtraction 3a. <u>Zeroing In</u> <i>What do you see?</i></p> <p>3b. <u>Scott Foresman</u> Chapter.4 sect B; Chapter 11 sect B lessons 11-9 and 11-10 3b. Activities from theschoolbell.com (Number Families) 3b. <u>Zeroing In</u> <i>Linking Addition and Subtraction</i></p> <p>3c. <u>Scott Foresman</u> Chapter 11 sect A lesson 11-4, 11-5, and 11-6 3c. <u>Zeroing In</u> <i>Linking Addition and Subtraction</i> 3c. <u>Zeroing In</u> <i>What do you see?</i></p> <p>4a. <u>Zeroing In</u> <i>Linking Addition and Subtraction</i></p>
--	--	---

<p>² Students need not use formal terms for these properties.</p> <p>Add and subtract within 20.</p> <p>5. Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).</p> <p>6. Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., $8+6=8+2+4=14$); decomposing a number leading to a ten (e.g., $13-4=13-3-1=9$); using the relationship between addition and subtraction (e.g., knowing that $8+4=12$, one knows $12-8=4$); and creating equivalent but easier or known sums (e.g., adding $6+7$ by creating the known equivalent $6+6+1=12+1=13$).</p> <p>Work with addition and subtraction equations.</p> <p>7. Understand the meaning of the equal sign, and determine if</p>	<p>Add and subtract within 20.</p> <p>5a. Count on and count back to solve addition and subtraction problems.</p> <p>6a. Solve basic addition and subtraction facts within 20.</p> <p>6b. Automatically recall addition and subtraction facts within 10.</p> <p>Work with addition and subtraction equations.</p> <p>7a. Identify true and false number sentences.</p> <p>7b. Describe what makes</p>	<p>5a. <u>Scott Foresman</u> Chapter 3 sect A ; Chapter 4 sect A 5a. <u>Zeroing In</u> <i>Counting on and Back</i></p> <p>6a. <u>Scott Foresman</u> Chapters 3, 4 & 11 6a. <u>Zeroing In</u> <i>Doubles and Near Doubles</i> 6a. <u>Zeroing In</u> <i>Linking Addition and Subtraction</i> 6a. <u>Zeroing In</u> <i>Anchor to 10</i> 6a. <u>Navigating through Numbers and Operation PK-2</u> <i>Park Your Car</i> pp. 49-51, <i>Double Plus or Minus</i> pp. 62-64, <i>Flip Two</i> pp. 65-67</p> <p>6b. <u>Zeroing In</u> <i>Using Number Frames, Facts for Ten, Doubles and Near Doubles</i> 6b. <u>Navigating through Numbers and Operation PK-2</u> <i>Park Your Car</i> pp. 49-51, <i>Double Plus or Minus</i> pp. 62-64, <i>Flip Two</i> pp. 65-67, <i>One Dash Out</i> pp. 82-84</p> <p>7a. <u>Zeroing In</u> <i>Equality</i></p> <p>7b. <u>Zeroing In</u> <i>Equality</i></p>
---	---	--

<p>equations involving addition and subtraction are true or false. <i>For example, which of the following equations are true and which are false?</i> $6=6$, $7=8-1$, $5+2=2+5$, $4+1=5+2$.</p> <p>8. Determine the unknown whole number in an addition or subtraction equation relating to three whole numbers. <i>For example, determine the unknown number that makes the equation true in each of the equations $8+?=11$, $5=\square-3$, $6+6=\square$.</i></p>	<p>number sentences true or false.</p> <p>8a. Determine the unknown whole number in an addition or subtraction equation.</p>	<p>8a. <u>Navigating through Algebra PK-2</u> ch 2, <i>How Many are Under the Cup?</i> Pp. 34-35, <i>Lots of Spots</i> pp. 36-37, <i>Block Pounds</i> pp. 44-46 8a. <u>Zeroing In</u> <i>Linking Addition and Subtraction, Equality</i></p> <p><u>Literature Connections</u> <i>Animals on Board</i> by Stuart J. Murphy <i>Elevator Magic</i> by Stuart J. Murphy <i>Ten , Nine, Eight</i> by Molly Bang <i>Mission Addition</i> by Loreen Leedy <i>Anno’s Counting Book</i> by Mitsumasa Anno <i>Fish Eyes</i> by Lois Ehlert</p> <p><u>Games</u> Chip Change Game (making ten) Turn Over Ten--handout X-Ray Vision--handout Finding Doubles Game Five in a Row (Investigations Grade 1, Building Number Sense, pp. 211-214) Ten Turns (Investigations Grade 1, Building Number Sense, pp. 204-205) Counters in a Cup (Investigations Grade 1, Building Number Sense, pp. 196-197) On and Off (Investigations Grade 1, Building Number Sense, pp. 194-195) Double Compare (Investigations Grade 1, Building Number Sense, pp. 193) Compare (Investigations Grade 1, Math Thinking at Gr. 1, pp. 157) Flip Two (Navigating through Number and Operations PK-2, pp. 65) Spillover Game-handout Block Out Ten-handout Difference Game-handout High Roller-handout</p>
--	--	--

		<p>Addition Flip (Now I Get It, CD resources) Finding Tens (Now I Get It, CD resources) Five in a Row With Three Cards (Investigations Grade 1, Number Games and Story Problems, p. 214-217) Tens Go Fish (Investigations Grade 1, Number Games and Story Problems, p. 218) Total of Ten (Investigations Grade 1, Number Games and Story Problems, p. 183) Number Island-handout Everyday Counts Partner Games Grade 1 Tape Race pp. 14-15 All in a Row pp. 18-19 Neighbors (One More, One Less) pp.20-21 Make the Sum pp. 22-23 Take-Away Stories pp. 26-27 Double Draw Card Comparing pp. 30-31 Win the Dominos pp. 32-33 Chart Race pp. 34-35 Fill up Tens to Take Away pp. 38-39 Take the Difference pp. 40-41 Doubles and Doubles +1 Concentration pp. 42-43</p> <p>RTI Interventions OCM (Oral Counting)</p> <ol style="list-style-type: none"> 1. OCM Count aloud with others (say the forward number word sequence). 2. OCM Count objects with monitoring. 3. OCM Touch one-say one with peer or adult (one-to-one tagging). Assist as necessary, including holding the student's hand while touching one/saying one. 4. OCM, NIM Student grabs a handful of small objects and then counts to find how many. Given a hundred chart, student places the objects one-by-one on the numbers. 5. OCM, NIM, QDM Using a die with numbers (numbers can vary depending on the skill of the student) and a group of objects, the student rolls the die, says the number, and takes out of the group that many objects. The teacher or another student does the same. Each person should say whether he or she has more or less than the other person. Without putting the
--	--	--

		<p>objects back, the first student takes another turn (roll, say, count out) and adds the new amount to the first amount. After the second person goes, each determines and then states whether he or she has more or less than the other person. As an extension, the amounts can be lined up side-by-side so that the student can determine how many more/less.</p> <ol style="list-style-type: none"> 6. OCM Count backwards with others (say the backward number word sequence). 7. OCM Count backwards while using a group of objects, removing one each time (perhaps the objects could be arranged onto ten-frames to support the conceptual understanding of teens numbers). 8. OCM Ask student to count on or count back from any number. 9. OCM, M-CBM With a small group of students, the first student begins counting, the next continues from where the first stops, etc. 10. OCM Count by 10's past 100, using base-10 blocks for support. 11. OCM Write the numbers said when counting by 10's to assist students in naming the next decade. Student can refer to the list of numbers that are written for support in naming numbers that come after 29, 39, 49, etc. 12. OCM Count objects grouped in tens (and extras), first counting by tens, then counting on the extras by ones. 13. OCM Have student group objects into tens (use cups or ten frames) and then count the objects by first counting by tens, then the extras by ones. 14. OCM, M-CAP Use number lines and the hundred chart to count on, count back, and see the organization of numbers and their relationships (Games like Chutes and Ladders with its 0-100 linear number line may help). 15. OCM, M-CBM, M-CAP Count on for addition. Have the student count a set of objects, hide the set with a screen, add some more objects that can be viewed, and
--	--	--

		<p>ask, “How many in all?” Model counting on from the screened set, counting one-by-one while touching each object in the visible group. Identify or write the appropriate addition equation for the given situation.</p> <p>NIM (Number Identification)</p> <ol style="list-style-type: none"> 16. NIM Ask students to trace numbers, or have them make numbers with their fingers in sand. 17. NIM, QDM Use 10-frames to model numbers (connect number names, numerals, and quantity representation). 18. NIM, QDM Match sets of objects in the teens with the written numeral, and say the word form (connect number names, numerals, and quantity representation). 19. NIM, QDM Connect numerals, quantity, and word-form by making posters and booklets. 20. OCM, NIM Student grabs a handful of small objects and then counts to find how many. Given a hundred chart, student places the objects one-by-one on the numbers. 21. NIM Use a deck of number cards 0-10 with corresponding quantities shown. Draw a card and ask the student to name it. The student may count the objects if necessary to help name the number. After naming, the student should place the number in a row in order (cards with zero on the left, then ones, etc.). Having the numbers in order may also help the student identify and name the numeral. 22. OCM, NIM, QDM Using a die with numbers (numbers can vary depending on the skill of the student) and a group of objects, the student rolls the die, says the number, and takes out of the group that many objects. The teacher or another student does the same. Each person should say whether he or she has more or less than the other person. Without putting the objects back, the first student takes another turn (roll, say, count out) and adds the new
--	--	---

		<p>amount to the first amount. After the second person goes, each determines and then states whether he or she has more or less than the other person. As an extension, the amounts can be lined up side-by-side so that the student can determine how many more/less.</p> <p>23. NIM Use a number line and a die labeled 1, 1, 2, 2, 3, 3. Student rolls the die and moves that many spaces, starting at zero. After the student finishes moving, he/she says the number. If correct, another turn may be taken. Play as a game.</p> <p>24. NIM, QDM Say word forms while touching numerals or quantities (connect quantity with number word forms).</p> <p>25. NIM, QDM Given cards with representations for numbers in the teens, using ten frame cards, put the cards in order from least to greatest. Say the number name for each card while saying the numbers in order. Do the same later with numeral cards.</p> <p>MNM (Missing Number)</p> <ol style="list-style-type: none"> 1. MNM Fill in missing numbers in sequence, especially using number lines for visual support. 2. MNM Ask student to name the number that comes between two given numbers. This can be done orally, in written form, or by having the student choose the appropriate number card to place between the given number cards. 3. MNM, M-CBM, M-CAP Ask student to find ten more or ten less than a number. <p>QDM (Quantity Discrimination)</p> <ol style="list-style-type: none"> 4. QDM If the student has difficulty counting correctly, line up objects to avoid skipped or double-counted objects. Ask student to move one object at a time over a boundary or into a new region while saying numbers. Counting objects in these fashions will be more successful than counting pictures of objects on a page.
--	--	--

		<ol style="list-style-type: none"> 5. QDM Ask student, “How many are there?” after he/she finishes counting (cardinality). If the student counts again to find out how many, ask again. If he/she counts again, teach the student that the last number said when counting tells how many there are. 6. QDM Ask student to count a set of objects that are lined up. Rearrange the objects (keeping them in full view) so that the space between objects is greater. Ask how many. If the student needs to count again, they may not understand conservation of number. Do the activity several times, explaining that the number doesn’t change when the arrangement of the objects changes. 7. QDM Ask student to show the correct number of fingers to match a spoken number. 8. NIM, QDM Use 10-frames to model numbers (connect number names, numerals, and quantity representation). 9. NIM, QDM Match sets of objects in the teens with the written numeral, and say the word form (connect number names, numerals, and quantity representation). 10. OCM, NIM, QDM Using a die with numbers (numbers can vary depending on the skill of the student) and a group of objects, the student rolls the die, says the number, and takes out of the group that many objects. The teacher or another student does the same. Each person should say whether he or she has more or less than the other person. Without putting the objects back, the first student takes another turn (roll, say, count out) and adds the new amount to the first amount. After the second person goes, each determines and then states whether he or she has more or less than the other person. As an extension, the amounts can be lined up side-by-side so that the student can determine how many more/less. 11. NIM, QDM Say word forms while touching numerals or quantities (connect
--	--	--

		<p>quantity with number word forms).</p> <p>12. NIM, QDM Given cards with representations for numbers in the teens, using ten frame cards, put the cards in order from least to greatest. Say the number name for each card while saying the numbers in order. Do the same later with numeral cards.</p> <p>13. QDM Have student determine which of two quantities or numbers is more/less. When given quantities, student may have to count each quantity.</p> <p>14. QDM Make the connection between the written form of a two-digit number and the number of tens and the number of extras (ones).</p> <p>Operations and Algebraic Thinking M-CBM</p> <p>15. OCM, M-CBM With a small group of students, the first student begins counting, the next continues from where the first stops, etc.</p> <p>16. M-CBM Decompose numbers in different ways (“Show me 6.” “Show me 6 another way.” Make a booklet of 8 using red and green stickers and connect to appropriate addition equations).</p> <p>17. M-CBM Use part/part/whole mats or representations to assist with adding and subtracting.</p> <p>18. M-CBM Count by 10’s starting with a number less than 10. Use base-10 blocks for support.</p> <p>19. M-CBM, M-CAP Play X-Ray Vision (game to support addition/subtraction and decomposition of numbers).</p> <p>20. M-CBM, M-CAP Estimate the number of a group of objects. Activities might include an estimation jar, or questions that ask, “How many?” in meaningful situations. Ask if certain estimations are reasonable, too high, or too low.</p> <p>21. M-CBM Teach the student that the “+” sign means put together and the “-“ sign means separate. Model with objects to help explain.</p>
--	--	---

		<p>22. M-CBM, M-CAP Subtract by modeling simple situations and then identifying or writing the appropriate subtraction equation. Subtract given a quantity, covering the quantity, and having some taken away (but still visible). When asked how many remain under the cover, the student can be shown how to say the original number and count backwards one-by-one while touching each object that was taken away. The student may also use a counting-up strategy by saying the number of the quantity that was taken away, then continuing to count up one-by-one until he reaches the original number while keeping track of how many numbers he says by using fingers. Identify or write appropriate equations.</p> <p>23. MNM, M-CBM, M-CAP Ask student to find one more or one less than a number.</p> <p>24. MNM, M-CBM, M-CAP Ask student to find ten more or ten less than a number.</p> <p>25. M-CBM Use fingers and tens frames cards to find combinations of ten. Ask, “How many more make ten?”</p> <p>26. M-CBM Play the games, “Number Island” and “Block Out Ten” to support combinations of ten.</p> <p>27. M-CBM Play the game, “The Game of Tens and Ones” to support addition/subtraction of one and ten.</p> <p>28. M-CBM Two-Fisted Pennies Game (RTI folder)</p> <p>29. M-CBM Addition Top-It (RTI folder)</p>
--	--	--

RSU 54/ MSAD #54 Math Curriculum

Content Area: Math
Unit: Number and Operations in Base Ten

Grade: Grade 1

Common Core State Standards Domain: Number and Operations in Base Ten

Common Core State Standards	RSU 54/MSAD 54 Objectives	Instructional Resources/Activities
<p>Extend the counting sequence.</p> <p>1. Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.</p>	<p>Extend the counting sequence.</p> <p>1a. Count to 120 starting at any number less than 120.</p> <p>1b. Read and write numerals less than 120.</p> <p>1c. Represent a number of objects with a written numeral up to 120.</p>	<p>1a. <u>Scott Foresman</u> Chapter 7 1a.<u>Zeroing In</u>: <i>Pattern of the Count</i></p> <p>1b. <u>Scott Foresman</u> Chapter 7 1b.<u>Zeroing In</u>: <i>Pattern of the Count</i> 1b.<u>Zeroing In</u>: <i>Connecting Representations</i> 1b.<u>Zeroing In</u>: <i>Using a Hundreds Chart</i> 1b.<u>Zeroing In</u>: <i>Missing Numbers on the Hundreds Chart</i></p> <p>1c.<u>Scott Foresman</u> Chapter7 1c.<u>Zeroing In</u>: <i>Connecting Representations</i> 1c.<u>Zeroing In</u>: <i>Counting by Tens and Ones</i></p>
<p>Understand place value.</p> <p>2. Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases:</p> <p>a. 10 can be thought of as a bundle of ten ones—called a “ten.”</p> <p>b. The numbers from</p>	<p>Understand place value.</p> <p>2a1. Understand that ten single objects represent a single unit of ten.</p> <p>2a2. Understand that ten pennies are the same value as one dime.</p> <p>2b1. Decompose numerals 11 to</p>	<p>2a1.<u>Zeroing In</u>: <i>Counting by Tens and Ones</i> 2a1.<u>Zeroing In</u>: <i>What’s My Number?</i></p> <p>2a2.<u>Scott Foresman</u> Chapter 9 Lesson 9-2</p> <p>2b1.<u>Scott Foresman</u> Chapter 7 Lesson 7-1</p>

<p>11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.</p> <p>c. The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).</p> <p>3. Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols $>$, $=$, and $<$.</p> <p>Use place value understanding and properties of operations to add and subtract.</p> <p>4. Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of</p>	<p>19 into a group of ten and left over ones.</p> <p>2b2. Compose a number of ones and a group of tens into a numeral 11 to 19.</p> <p>2c1. Understand that multiple units of ten can be counted as 10, 20, 30, 40, 50, 60, 70, 80, 90 or one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).</p> <p>2c2. Understand that dimes can be counted as 10, 20, 30, 40, 50, 60, 70, 80, 90, 100.</p> <p>3a. Identify the greater or lesser number given two two-digit numbers.</p> <p>3b. Explain the reason for greater or lesser based on tens and ones.</p> <p>3c. Use the symbols $>$, $=$, and $<$ to record the results of comparing two two-digit numbers.</p> <p>Use place value understanding and properties of operations to add and subtract.</p> <p>4a. Add a two-digit number and a one-digit number within 100.</p> <p>4b. Add a two-digit number and a multiple of 10 within 100.</p> <p>4c. Explain the reasoning used to add two-digit numbers within 100.</p> <p>4d. Relate the reasoning to a written method ($22+7 = 20+2+7 = 20+9 = 29$)</p> <p>4e. Understand that in adding</p>	<p>2b1. <u>Zeroing In: Anchor to Ten</u></p> <p>2b2. <u>Scott Foresman</u> Chapter 11 Lesson 11-3 2b2. <u>Zeroing In: Anchor to Ten</u></p> <p>2c1. <u>Scott Foresman</u> Chapter 8</p> <p>2c2. <u>Scott Foresman</u> Chapter 9 Lesson 9-2</p> <p>3a. <u>Zeroing In: Along the Line</u> 3a. <u>Navigating through Number and Operations PK-2 Make a Match</u> pp. 76-78</p> <p>3b. <u>Zeroing In: Along the Line</u> 3b. <u>Navigating through Number and Operations PK-2 Make a Match</u> pp. 76-78</p> <p>3c. <u>Scott Foresman</u> Chapter 8 Lesson 8-7</p> <p>4a. <u>Scott Foresman</u> Chapter 12 Lesson 12-4 4a. <u>Zeroing In: Modeling Addition and Subtraction</u> (modify so students stop at 100) 4b. <u>Scott Foresman</u> Chapter 12 Lesson 12-2</p> <p>4e. <u>Zeroing In: Modeling Addition and Subtraction</u></p>
--	--	---

<p>operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.</p> <p>5. Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.</p> <p>6. Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90 (positive or zero differences), 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.</p>	<p>two-digit numbers sometimes it is necessary to compose a ten.</p> <p>5a. Mentally find 10 more than or 10 less than a given two-digit number without having to count.</p> <p>5b. Explain the reasoning for the sum of 10 more or 10 less than a two digit number.</p> <p>6a. Subtract multiples of ten from multiples of ten ($60-20 = 40$) using multiple strategies.</p> <p>6b. Explain the reasoning used to subtract multiples of 10.</p> <p>6c. Relate the reasoning to a written method.</p>	<p>(modify so students stop at 100)</p> <p>5a. <u>Navigating through Number and Operations PK-2 Trading Up or Down</u> pp. 23-25</p> <p>5b. <u>Navigating through Number and Operations PK-2 Trading Up or Down</u> pp. 23-25</p> <p>6a. <u>Scott Foresman</u> Chapter12 Lesson 12-6</p> <p>6c. <u>Scott Foresman</u> Chapter12 Lesson 12-6</p> <p><u>General Resources</u> <u>Number Sense Routines</u> Lucy West, Chapter 7 gives great ideas for discussing mathematical thinking with students.</p> <p><u>Literature Connections</u> <i>Ten Black Dots</i> by Donald Crews <i>Ten , Nine, Eight</i> by Molly Bang <i>Anno’s Counting Book</i> by Mitsumasa Anno <i>Fish Eyes</i> by Lois Ehlert <i>Ten Flashing Fireflies</i> by Philemon Sturges</p> <p><u>Games</u> Everyday Counts Partner Games Grade 1</p>
--	--	---

		<p>Tape Race pp. 14-15 5, 10, 15, 20, 25! Pp. 16-17 All in a Row pp. 18-19 Fill Up Ten and Then Again to 30pp. 24-25</p> <p>Teen Number Concentration pp. 46-47 Race for a Dollar pp. 48-49 High-Low pp. 50-51 Lu Lu pp. 52-53</p> <p>RTI Interventions OCM (Oral Counting)</p> <ol style="list-style-type: none"> 1. OCM Count aloud with others (say the forward number word sequence). 2. OCM Count objects with monitoring. 3. OCM Touch one-say one with peer or adult (one-to-one tagging). Assist as necessary, including holding the student's hand while touching one/saying one. 4. OCM, NIM Student grabs a handful of small objects and then counts to find how many. Given a hundred chart, student places the objects one-by-one on the numbers. 5. OCM, NIM, QDM Using a die with numbers (numbers can vary depending on the skill of the student) and a group of objects, the student rolls the die, says the number, and takes out of the group that many objects. The teacher or another student does the same. Each person should say whether he or she has more or less than the other person. Without putting the objects back, the first student takes another turn (roll, say, count out) and adds the new amount to the first amount. After the second person goes, each determines and then states whether he or she has more or less than the other person. As an extension, the amounts can be lined up side-by-side so that the student can determine how many more/less. 6. OCM Count backwards with others (say the backward number word sequence). 7. OCM Count backwards while using a group of objects, removing one each time (perhaps the objects could be arranged
--	--	--

		<p>onto ten-frames to support the conceptual understanding of teens numbers).</p> <ol style="list-style-type: none"> 8. OCM Ask student to count on or count back from any number. 9. OCM, M-CBM With a small group of students, the first student begins counting, the next continues from where the first stops, etc. 10. OCM Count by 10's past 100, using base-10 blocks for support. 11. OCM Write the numbers said when counting by 10's to assist students in naming the next decade. Student can refer to the list of numbers that are written for support in naming numbers that come after 29, 39, 49, etc. 12. OCM Count objects grouped in tens (and extras), first counting by tens, then counting on the extras by ones. 13. OCM Have student group objects into tens (use cups or ten frames) and then count the objects by first counting by tens, then the extras by ones. 14. OCM, M-CAP Use number lines and the hundred chart to count on, count back, and see the organization of numbers and their relationships (Games like Chutes and Ladders with its 0-100 linear number line may help). 15. OCM, M-CBM, M-CAP Count on for addition. Have the student count a set of objects, hide the set with a screen, add some more objects that can be viewed, and ask, "How many in all?" Model counting on from the screened set, counting one-by-one while touching each object in the visible group. Identify or write the appropriate addition equation for the given situation. <p>NIM (Number Identification)</p> <ol style="list-style-type: none"> 16. NIM Ask students to trace numbers, or have them make numbers with their fingers in sand. 17. NIM, QDM Use 10-frames to model numbers (connect number names, numerals, and quantity representation).
--	--	--

		<p>18. NIM, QDM Match sets of objects in the teens with the written numeral, and say the word form (connect number names, numerals, and quantity representation).</p> <p>19. NIM, QDM Connect numerals, quantity, and word-form by making posters and booklets.</p> <p>20. OCM, NIM Student grabs a handful of small objects and then counts to find how many. Given a hundred chart, student places the objects one-by-one on the numbers.</p> <p>21. NIM Use a deck of number cards 0-10 with corresponding quantities shown. Draw a card and ask the student to name it. The student may count the objects if necessary to help name the number. After naming, the student should place the number in a row in order (cards with zero on the left, then ones, etc.). Having the numbers in order may also help the student identify and name the numeral.</p> <p>22. OCM, NIM, QDM Using a die with numbers (numbers can vary depending on the skill of the student) and a group of objects, the student rolls the die, says the number, and takes out of the group that many objects. The teacher or another student does the same. Each person should say whether he or she has more or less than the other person. Without putting the objects back, the first student takes another turn (roll, say, count out) and adds the new amount to the first amount. After the second person goes, each determines and then states whether he or she has more or less than the other person. As an extension, the amounts can be lined up side-by-side so that the student can determine how many more/less.</p> <p>23. NIM Use a number line and a die labeled 1, 1, 2, 2, 3, 3. Student rolls the die and moves that many spaces, starting at zero. After the student finishes moving, he/she says the number. If correct, another turn may be taken. Play as a game.</p> <p>24. NIM, QDM Say word forms while</p>
--	--	--

		<p>touching numerals or quantities (connect quantity with number word forms).</p> <p>25. NIM, QDM Given cards with representations for numbers in the teens, using ten frame cards, put the cards in order from least to greatest. Say the number name for each card while saying the numbers in order. Do the same later with numeral cards.</p> <p>MNM (Missing Number)</p> <ol style="list-style-type: none"> 1. MNM Fill in missing numbers in sequence, especially using number lines for visual support. 2. MNM Ask student to name the number that comes between two given numbers. This can be done orally, in written form, or by having the student choose the appropriate number card to place between the given number cards. 3. MNM, M-CBM, M-CAP Ask student to find ten more or ten less than a number. <p>QDM (Quantity Discrimination)</p> <ol style="list-style-type: none"> 4. QDM If the student has difficulty counting correctly, line up objects to avoid skipped or double-counted objects. Ask student to move one object at a time over a boundary or into a new region while saying numbers. Counting objects in these fashions will be more successful than counting pictures of objects on a page. 5. QDM Ask student, “How many are there?” after he/she finishes counting (cardinality). If the student counts again to find out how many, ask again. If he/she counts again, teach the student that the last number said when counting tells how many there are. 6. QDM Ask student to count a set of objects that are lined up. Rearrange the objects (keeping them in full view) so that the space between objects is greater. Ask how many. If the student needs to count again, they may not understand conservation of number. Do the activity several times, explaining that the number doesn’t change
--	--	---

		<p>when the arrangement of the objects changes.</p> <ol style="list-style-type: none"> 7. QDM Ask student to show the correct number of fingers to match a spoken number. 8. NIM, QDM Use 10-frames to model numbers (connect number names, numerals, and quantity representation). 9. NIM, QDM Match sets of objects in the teens with the written numeral, and say the word form (connect number names, numerals, and quantity representation). 10. OCM, NIM, QDM Using a die with numbers (numbers can vary depending on the skill of the student) and a group of objects, the student rolls the die, says the number, and takes out of the group that many objects. The teacher or another student does the same. Each person should say whether he or she has more or less than the other person. Without putting the objects back, the first student takes another turn (roll, say, count out) and adds the new amount to the first amount. After the second person goes, each determines and then states whether he or she has more or less than the other person. As an extension, the amounts can be lined up side-by-side so that the student can determine how many more/less. 11. NIM, QDM Say word forms while touching numerals or quantities (connect quantity with number word forms). 12. NIM, QDM Given cards with representations for numbers in the teens, using ten frame cards, put the cards in order from least to greatest. Say the number name for each card while saying the numbers in order. Do the same later with numeral cards. 13. QDM Have student determine which of two quantities or numbers is more/less. When given quantities, student may have to count each quantity. 14. QDM Make the connection between the written form of a two-digit number and the number of tens and the number of extras
--	--	--

		<p>(ones).</p> <p>Operations and Algebraic Thinking M-CBM</p> <ol style="list-style-type: none"> 15. OCM, M-CBM With a small group of students, the first student begins counting, the next continues from where the first stops, etc. 16. M-CBM Decompose numbers in different ways (“Show me 6.” “Show me 6 another way.” Make a booklet of 8 using red and green stickers and connect to appropriate addition equations). 17. M-CBM Use part/part/whole mats or representations to assist with adding and subtracting. 18. M-CBM Count by 10’s starting with a number less than 10. Use base-10 blocks for support. 19. M-CBM, M-CAP Play X-Ray Vision (game to support addition/subtraction and decomposition of numbers). 20. M-CBM, M-CAP Estimate the number of a group of objects. Activities might include an estimation jar, or questions that ask, “How many?” in meaningful situations. Ask if certain estimations are reasonable, too high, or too low. 21. M-CBM Teach the student that the “+” sign means put together and the “-” sign means separate. Model with objects to help explain. 22. M-CBM, M-CAP Subtract by modeling simple situations and then identifying or writing the appropriate subtraction equation. Subtract given a quantity, covering the quantity, and having some taken away (but still visible). When asked how many remain under the cover, the student can be shown how to say the original number and count backwards one-by-one while touching each object that was taken away. The student may also use a counting-up strategy by saying the number of the quantity that was taken away, then continuing to count up one-by-one until he reaches the original number while keeping
--	--	---

		<p>track of how many numbers he says by using fingers. Identify or write appropriate equations.</p> <ol style="list-style-type: none">23. MNM, M-CBM, M-CAP Ask student to find one more or one less than a number.24. MNM, M-CBM, M-CAP Ask student to find ten more or ten less than a number.25. M-CBM Use fingers and tens frames cards to find combinations of ten. Ask, “How many more make ten?”26. M-CBM Play the games, “Number Island” and “Block Out Ten” to support combinations of ten.27. M-CBM Play the game, “The Game of Tens and Ones” to support addition/subtraction of one and ten.28. M-CBM Two-Fisted Pennies Game (RTI folder)29. M-CBM Addition Top-It (RTI folder)
--	--	---

RSU 54/MSAD 54 Math Curriculum

Content Area: Math
Unit: Measurement and Data

Grade: Grade 1

Common Core State Standards Domain: Measurement and Data

Common Core State Standards	RSU 54/MSAD 54 Objectives	Instructional Resources/Activities
<p>Measure lengths indirectly and by iterating length units</p> <p>1. Order three objects by length; compare the lengths of two objects indirectly by using a third object.</p> <p>2. Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. <i>Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.</i></p> <p>Tell and write time.</p> <p>3. Tell and write time in hours and half-hours using analog and digital clocks.</p>	<p>Measure lengths indirectly and by iterating length units</p> <p>1a. Put three objects in order by length. 1b. Determine longer/shorter by comparing objects to a third object.</p> <p>2a. Measure objects to the nearest unit using non-standard measurements (paperclips, cubes, cards, etc.) by laying them end to end with no gaps or overlaps.</p> <p>Tell and write time.</p> <p>3a. Identify the hour hand, the minute hand and their functions.</p>	<p>1a. <u>Navigating through Measurement PK-2 Ribbon Heights</u> pp. 24-26</p> <p>1b. <u>Navigating through Measurement PK-2 Ribbon Heights</u> pp. 24-26</p> <p>2a. <u>Scott Foresman</u> Chapter 10 lesson 10-1 and 10-2 2a. <u>Navigating through Measurement PK-2 Snake Imprints</u> pp. 37-40 (modify using paper strips), <u>Grandma</u> pp. 49-51</p> <p>3a. <u>Scott Foresman</u> Chapter 6, lesson 6-2 Literature Connection: <u>The Grouchy Ladybug</u> Eric Carle</p>

<p>Represent and interpret data.</p> <p>4. Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.</p>	<p>3b. Tell and write to the hour on an analog and digital clock.</p> <p>3c. Tell and write time to the half hour on an analog and digital clock.</p> <p>Represent and interpret data.</p> <p>4a. Collect data and organize into real graphs, picture graphs, bar graphs, tables, charts, and line plots with up to three categories.</p> <p>4b. Formulate and answer questions based on the data.</p>	<p>3b. <u>Scott Foresman</u> Chapter 6 lesson 6-3 Literature Connection: <u>The Grouchy Ladybug</u> Eric Carle</p> <p>3c. <u>Scott Foresman</u> Chapter 6 lesson 6-4 Literature Connection: <u>The Grouchy Ladybug</u> Eric Carle</p> <p>4a. <u>Scott Foresman</u> Chapter 8 sec. C 4a. <u>Navigating through Data Analysis and Probability PK-2 Families</u> pp. 30-32, <i>Row Your Boat</i> pp. 33-35, <i>Mystery Graphs</i> pp. 50-52</p> <p>4b. <u>Scott Foresman</u> Chapter 8 sec. C 4b. <u>Navigating through Data Analysis and Probability PK-2 Families</u> pp. 30-32, <i>Row Your Boat</i> pp. 33-35, <i>Mystery Graphs</i> pp. 50-52</p> <p><u>Literature Connections</u> <i>Chrysanthemum</i> by Kevin Henkes <i>Clocks and More Clocks</i> by Pat Hutchins <i>How Big is a Foot?</i> By Rolf Myller <i>Much Bigger than Martin</i> by Steven Kellogg</p>
--	---	--

RSU 54/MSAD 54 Math Curriculum

Content Area: Math
Unit: Geometry

Grade: Grade 1

Common Core State Standards Domain: Geometry

Common Core State Standards	RSU 54/MSAD 54 Objectives	Instructional Resources/Activities
<p>Reason with shapes and their attributes.</p> <p>1. Distinguish between defining attributes, (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes.</p> <p>2. Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape.⁴</p> <p>3. Partition circles and rectangles into two and four equal shares, describe the shares using the <i>words halves, fourths, and</i></p>	<p>Reason with shapes and their attributes.</p> <p>1a. Distinguish between defining attributes and non-defining attributes.</p> <p>1b. Build and draw shapes to possess defining attributes.</p> <p>2a. Compose two-dimensional shapes or three-dimensional shapes to create a composite shape, and compose new shapes from the composite shape.</p> <p>3a. Partition circles and rectangles into two and four equal shares.</p>	<p>1a. <u>Scott Foresman</u> Chapters 5 Lessons 5-4, 5-5, and 5-6 1a. <u>Navigating through Geometry PK-2</u> <i>Cutting Corners</i> pp. 22-25 1a. <u>Navigating through Problem Solving and Reasoning in Gr. 1</u> <i>Inside or Outside</i> pp. 16-19</p> <p>1b. <u>Scott Foresman</u> Chapter 5 Lessons 5-4, 5-5, and 5-6</p> <p>2a. <u>Navigating through Geometry PK-2</u> <i>Shapes from Shapes</i> pp. 14-16 2a. <u>Navigating through Geometry PK-2</u> <i>Skeletons</i> pp. 76-78</p> <p>3a. <u>Scott Foresman</u> Chapter 5 Lesson 5-11</p>

<p><i>quarters</i>, and use the phrases <i>half of</i>, <i>fourth of</i>, and <i>quarter of</i>. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares.</p> <p>⁴ Students do not need to learn formal names such as “right rectangular prism.”</p>	<p>3b. Describe the shares using the words halves, fourths and quarters and use the phrases half of, fourth of, and quarter of.</p> <p>3c. Describe the whole as two of or four of the shares.</p> <p>3d. Understand that decomposing into more equal shares creates smaller shares.</p>	<p>3b. <u>Scott Foresman</u> Chapter 5 Lesson 5-12</p> <p>3b. <u>Navigating through Numbers and Operations PK-2 Fraction Concentration</u> pp. 33-35</p> <p>3b-d. <u>Eating Fractions</u> Bruce McMillan (picture book)</p> <p><u>Literature Connections</u></p> <p><i>The Greedy Triangle</i> by Marilyn Burns</p> <p><i>Captain Invincible</i> by Stuart j. Murphy</p> <p><i>Shapes, Shapes, Shapes</i> by Tana Hoban</p>
---	--	--