### Content Area: Math Unit: Operations and Algebraic Thinking

Grade: Grade 1

# Common Core State Standards Domain: Operations and Algebraic Thinking

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

whole numbers whose	to 20.	
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.		
<sup>1.</sup> See Glossary, Table		
	Understand and apply	
Understand and	nronerties of operations and	
annly properties of	the relationship between	
operations and the	addition and subtraction	
relationshin between		
addition and		
subtraction		
subtraction	3a Know that the order of	
3 Apply properties	addends doesn't affect the sum	3a Scott Foresman Chapter 3 sect A
of operations as	and apply that fact to	3a. Zeroing In Linking Addition and Subtraction
strategies to add and	computation (e.g. $2+9=9+2$ )	3a Zeroing In What do you see?
subtract <sup>2</sup> Examples:	(0.5., 2+) = (1+2).	Su. <u>Deronig in</u> what do you see.
If $8+3-11$ is known	3b Identify fact families for	3b Scott Foresman Chapter 4 sect B: Chapter 11
1 = 1 = 1 = 1 = 1 = 1 = 1 = 1 = 1 = 1 =	addition and subtraction facts	sect B lessons 11-9 and 11-10
known (Commutative	addition and subtraction facts.	3b Activities from theschoolbell com (Number
nroperty of addition		Families)
To add $2+6+4$ the		3b Zeroing In Linking Addition and Subtraction
second two numbers	3c. Know that the order of	50. <u>Zeronig in</u> Enking Maunon and Subtraction
can be added to make	combining numbers in a number	3c Scott Foresman Chapter 11 sect A lesson 11-4
a ten so	sentence doesn't affect the sum	11-5 and $11-6$
2+6+4-2+10-12	and apply that fact to	3c Zeroing In Linking Addition and Subtraction
(A ssociative property)	computations (e.g. $5+5+4 -$	3c. Zeroing In What do you see?
of addition	10+4	Se. <u>Zeronig in</u> maar do you see.
oj uddillon.)	10++).	
4 Understand	4a Solve subtraction problems	As Zeroing In Linking Addition and Subtraction
subtraction as an	as unknown addend problems	-a. <u>Zeronig in</u> Emking Addition and Subtraction
unknown-addend	as unknown addend problems.	
nrohlem For		
example subtract 10		
8 by finding the		
number that makes 10		
when added to 8		

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

equations involving	number sentences true or false.	
addition and		
subtraction are true or		
false. For example.		
which of the following		
equations are true		
and which are false?		
6-6 $7-8$ 1		
0-0, 7-0-1, 5+2-2+5, 4+1-5+2		
3+2=2+3, 4+1=3+2.		
8. Determine the	8a. Determine the unknown	8a. Navigating through Algebra PK-2 ch 2. <i>How</i>
unknown whole	whole number in an addition or	Many are Under the Cup? Pp. 34-35. Lots of Spots
number in an addition	subtraction equation.	pp. 36-37. <i>Block Pounds</i> pp. 44-46
or subtraction	succusion equation	8a Zeroing In Linking Addition and Subtraction
equation relating to		Fauality
three whole numbers		Equality
For example		Literature Connections
determine the		Animals on Board by Stuart I Murphy
unknown number that		Flevator Magic by Stuart I. Murphy
makes the equation		Tan Ning Fight by Molly Bang
true in each of the		Mission Addition by Loroon Loady
true in each $0j$ the		Anno's Counting Back by Mitsumasa Anno
$equations \ 8+?=11,$		<i>Anno's Counting Dook</i> by Mitsuinasa Anno
<i>5=∐-3</i> , <i>6</i> + <i>6</i> = <i>∐</i> .		Fish Eyes by Lois Enlert
		Comes
		Chin Change Game (making ten)
		Turn Over Ten, handout
		Y Pay Vision handout
		Finding Doubles Game
		Five in a Pow (Investigations Grade 1 Building
		Number Sense, pp. 211–214)
		Ton Turns (Investigations Grade 1 Duilding
		Number Sense pp. 204 205)
		Number Sense, pp. 204-205)
		Counters in a Cup (Investigations Grade 1, Duilding Number Sense and 10( 107)
		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 I, Math Thinking
		at Gr. 1, pp. 157)
		$\mathbf{E}_{i}^{T} = \mathbf{T}_{i}^{T} = \mathbf{T}_{i}^{$
		Flip Two (Navigating through Number and
		Flip Two (Navigating through Number and Operations PK-2, pp. 65)
		Flip Two (Navigating through Number and Operations PK-2, pp. 65) Spillover Game-handout
		Flip Two (Navigating through Number and Operations PK-2, pp. 65) Spillover Game-handout Block Out Ten-handout
		Flip Two (Navigating through Number and Operations PK-2, pp. 65) Spillover Game-handout Block Out Ten-handout Difference Game-handout

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
Cames and Stary Problems, p. 218)
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) nn 20-21
Make the Sum nn 22 22
Take the Sum pp. 22-25
Take-Away Stories pp. 20-27
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 $\pm 1$ Concentration pp
<i>A7 A2</i>
42-43
RTI Interventions
<b>RTI Interventions</b>
<b>RTI Interventions</b> OCM (Oral Counting)
RTI Interventions OCM (Oral Counting) 1. OCM Count aloud with others (say the
<ul> <li><b>RTI Interventions</b></li> <li>OCM (Oral Counting)</li> <li>1. <b>OCM</b> Count aloud with others (say the forward number word sequence).</li> </ul>
<ul> <li><b>RTI Interventions</b></li> <li>OCM (Oral Counting)</li> <li>1. <b>OCM</b> Count aloud with others (say the forward number word sequence).</li> <li>2. <b>OCM</b> Count objects with monitoring.</li> </ul>
<ul> <li><b>RTI Interventions</b></li> <li>OCM (Oral Counting)</li> <li>1. OCM Count aloud with others (say the forward number word sequence).</li> <li>2. OCM Count objects with monitoring.</li> <li>3. OCM Touch one-say one with peer or</li> </ul>
<ul> <li>RTI Interventions</li> <li>OCM (Oral Counting)</li> <li>1. OCM Count aloud with others (say the forward number word sequence).</li> <li>2. OCM Count objects with monitoring.</li> <li>3. OCM Touch one-say one with peer or adult (one-to-one tagging). Assist as</li> </ul>
<ul> <li>RTI Interventions</li> <li>OCM (Oral Counting)</li> <li>1. OCM Count aloud with others (say the forward number word sequence).</li> <li>2. OCM Count objects with monitoring.</li> <li>3. OCM Touch one-say one with peer or adult (one-to-one tagging). Assist as necessary, including holding the student's</li> </ul>
<ul> <li>RTI Interventions <ul> <li>OCM (Oral Counting)</li> <li>1. OCM Count aloud with others (say the forward number word sequence).</li> <li>2. OCM Count objects with monitoring.</li> <li>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/saving one.</li> </ul> </li> </ul>
<ul> <li>RTI Interventions</li> <li>OCM (Oral Counting)</li> <li>1. OCM Count aloud with others (say the forward number word sequence).</li> <li>2. OCM Count objects with monitoring.</li> <li>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.</li> <li>4. OCM. NIM Student grabs a handful of</li> </ul>
<ul> <li>RTI Interventions <ul> <li>OCM (Oral Counting)</li> <li>1. OCM Count aloud with others (say the forward number word sequence).</li> <li>2. OCM Count objects with monitoring.</li> <li>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.</li> <li>4. OCM, NIM Student grabs a handful of small objects and then counts to find how</li> </ul></li></ul>
<ul> <li>RTI Interventions <ul> <li>OCM (Oral Counting)</li> <li>1. OCM Count aloud with others (say the forward number word sequence).</li> <li>2. OCM Count objects with monitoring.</li> <li>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.</li> <li>4. OCM, NIM Student grabs a handful of small objects and then counts to find how many. Given a hundred abort student</li> </ul></li></ul>
<ul> <li>RTI Interventions <ul> <li>OCM (Oral Counting)</li> <li>1. OCM Count aloud with others (say the forward number word sequence).</li> <li>2. OCM Count objects with monitoring.</li> <li>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.</li> <li>4. OCM, NIM Student grabs a handful of small objects and then counts to find how many. Given a hundred chart, student</li> </ul></li></ul>
<ul> <li>RTI Interventions <ul> <li>OCM (Oral Counting)</li> <li>1. OCM Count aloud with others (say the forward number word sequence).</li> <li>2. OCM Count objects with monitoring.</li> <li>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.</li> </ul> </li> <li>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</li> </ul>
<ul> <li>RTI Interventions <ul> <li>OCM (Oral Counting)</li> <li>1. OCM Count aloud with others (say the forward number word sequence).</li> <li>2. OCM Count objects with monitoring.</li> <li>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.</li> <li>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.</li> </ul> </li> </ul>
<ul> <li>RTI Interventions <ul> <li>OCM (Oral Counting)</li> <li>1. OCM Count aloud with others (say the forward number word sequence).</li> <li>2. OCM Count objects with monitoring.</li> <li>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.</li> <li>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.</li> <li>5. OCM, NIM, QDM Using a die with</li> </ul> </li> </ul>
<ul> <li>RTI Interventions <ul> <li>OCM (Oral Counting)</li> <li>1. OCM Count aloud with others (say the forward number word sequence).</li> <li>2. OCM Count objects with monitoring.</li> <li>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.</li> <li>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.</li> <li>5. OCM, NIM, QDM Using a die with numbers (numbers can vary depending on</li> </ul> </li> </ul>
<ul> <li>RTI Interventions <ul> <li>OCM (Oral Counting)</li> <li>1. OCM Count aloud with others (say the forward number word sequence).</li> <li>2. OCM Count objects with monitoring.</li> <li>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.</li> <li>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.</li> <li>5. OCM, NIM, QDM Using a die with numbers (numbers can vary depending on the skill of the student) and a group of</li> </ul> </li> </ul>
<ul> <li>RTI Interventions <ul> <li>OCM (Oral Counting)</li> <li>1. OCM Count aloud with others (say the forward number word sequence).</li> <li>2. OCM Count objects with monitoring.</li> <li>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.</li> <li>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.</li> </ul> </li> <li>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</li> </ul>
<ul> <li>RTI Interventions OCM (Oral Counting) <ol> <li>OCM Count aloud with others (say the forward number word sequence).</li> <li>OCM Count objects with monitoring.</li> <li>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.</li> <li>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.</li> <li>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 groun that</li> </ol> </li> </ul>
<ul> <li>RTI Interventions OCM (Oral Counting) <ol> <li>OCM Count aloud with others (say the forward number word sequence).</li> <li>OCM Count objects with monitoring.</li> <li>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.</li> <li>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.</li> <li>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</li> </ol> </li> </ul>
<ul> <li>RTI Interventions OCM (Oral Counting) <ol> <li>OCM Count aloud with others (say the forward number word sequence).</li> <li>OCM Count objects with monitoring.</li> <li>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.</li> <li>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.</li> <li>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</li> </ol> </li> </ul>
<ul> <li>RTI Interventions OCM (Oral Counting) <ol> <li>OCM Count aloud with others (say the forward number word sequence).</li> <li>OCM Count objects with monitoring.</li> <li>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.</li> <li>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.</li> <li>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 can whether he or she has more or less theory.</li> </ol> </li> </ul>
<ul> <li>RTI Interventions OCM (Oral Counting) <ol> <li>OCM Count aloud with others (say the forward number word sequence).</li> <li>OCM Count objects with monitoring.</li> <li>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.</li> <li>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.</li> <li>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 argument.</li> </ol> </li> </ul>

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 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

objects back, the first student takes another

k, "How many in all?" Model counting in from the screened set, counting one-by- ne while touching each object in the sible group. Identify or write the opropriate addition equation for the given tuation.
<ul> <li>tuation.</li> <li>mber Identification)</li> <li>IM Ask students to trace numbers, or ive them make numbers with their ngers in sand.</li> <li>IM, QDM Use 10-frames to model imbers (connect number names, imerals, and quantity representation).</li> <li>IM, QDM Match sets of objects in the ens with the written numeral, and say the ord form (connect number names, imerals, and quantity representation).</li> <li>IM, QDM Connect numerals, quantity, id word-form by making posters and ooklets.</li> <li>CM, NIM Student grabs a handful of nall objects and then counts to find how any. Given a hundred chart, student aces the objects one-by-one on the imbers.</li> <li>IM Use a deck of number cards 0-10 ith corresponding quantities shown. raw a card and ask the student to name it. he student may count the objects if excessary to help name the number. After uning, the student should place the imber in a row in order (cards with zero in the left, then ones, etc.). Having the unbers in order may also help the student entify and name the numeral.</li> <li>CM, NIM, QDM Using a die with umbers (numbers can vary depending on e skill of the student rolls the die, says the umber and takes out of the group that</li> </ul>
any objects. The teacher or another udent does the same. Each person should by whether he or she has more or less than e other person. Without putting the ojects back, the first student takes another

<ul> <li>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.</li> <li>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.</li> <li>24. NIM, QDM Say word forms while touching numerals or quantities (connect quantity with number word forms).</li> <li>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.</li> </ul>
<ul> <li>MNM (Missing Number)</li> <li>1. MNM Fill in missing numbers in sequence, especially using number lines for visual support.</li> <li>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.</li> <li>3. MNM, M-CBM, M-CAP Ask student to find ten more or ten less than a number.</li> </ul>
<ul> <li>QDM (Quantity Discrimination)</li> <li>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.</li> </ul>

5 ODM A als aturdant "Illow many and
5. <b>QDM</b> 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
number said when counting tens now
many there are.
6. <b>QDM</b> 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
number. Do the activity several times,
explaining that the number doesn't change
when the arrangement of the objects
changes.
7. <b>QDM</b> Ask student to show the correct
number of fingers to match a spoken
number.
8 <b>NIM ODM</b> Use 10-frames to model
numbers (connect number names
numbers (connect number names,
numerals, and quantity representation).
9. NIN, QDN 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
number, and takes out of the group that
many objects. The teacher of 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
loss than the other nerver. As ar
less man me omer 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

	<ul> <li>quantity with number word forms).</li> <li>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.</li> <li>13. QDM Have student determine which of two quantities or numbers is more/less. When given quantities, student may have to count each quantity.</li> <li>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).</li> </ul>
	Operations and Algebraic Thinking M-CBM 15. <b>OCM, M-CBM</b> With a small group of students, the first student begins counting, the next continues from where the first stops, etc.
	<ol> <li>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).</li> <li>M-CBM Use part/part/whole mats or representations to assist with adding and subtracting.</li> <li>M-CBM Count by 10's starting with a number less than 10. Use base-10 blocks for support.</li> <li>M-CBM, M-CAP Play X-Ray Vision (game to support addition/subtraction and decomposition of numbers).</li> <li>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</li> </ol>
	<ul> <li>ask, "How many?" in meaningful situations. Ask if certain estimations are reasonable, too high, or too low.</li> <li>21. M-CBM Teach the student that the "+" sign means put together and the "-" sign means separate. Model with objects to help explain.</li> </ul>

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 saving 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
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. <b>M-CBM</b> Use fingers and tens frames cards
to find combinations of ten. Ask, "How
many more make ten?"
26. <b>M-CBM</b> 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: Number and Operations in Base Ten

Grade: Grade 1

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

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

11 to 19 are	19 into a group of ten and left	2b1. <u>Zeroing In</u> : Anchor to Ten
composed of a ten and	over ones.	
one, two, three, four,	2b2. Compose a number of ones	2b2. <u>Scott Foresman</u> Chapter 11 Lesson 11-3
five, six, seven, eight,	and a group of tens into a	2b2.Zeroing In: Anchor to Ten
or nine ones.	numeral 11 to 19.	
c. The numbers 10, 20, 30, 40, 50, 60, 70,	2c1. Understand that multiple units of ten can be counted as	2c1. <u>Scott Foresman</u> Chapter 8
80, 90 refer to one, two, three, four, five, six, seven, eight, or	10, 20, 30, 40, 50, 60, 70, 80, 90 or one, two, three, four, five, six, seven, eight, or nine tens	
nine tens (and 0 ones).	(and 0 ones). 2c2. Understand that dimes can be counted as 10, 20, 30, 40, 50, 60, 70, 80, 90, 100.	2c2. <u>Scott Foresman</u> Chapter 9 Lesson 9-2
2 Company true true	2. Identify the greater or lesser	2. Zancing In: Alana the Line
5. Compare two two-	salidentify the greater of lesser	3a. <u>Zeroning III</u> : Along the Line
on meanings of the	number given two two-digit	PK-2 Make a Match pp. 76-78
tens and ones digits	numbers.	<u>1 K-2</u> make a match pp. 70-70
recording the results	3b.Explain the reason for	3b.Zeroing In: Along the Line
of comparisons with	greater or lesser based on tens	3b. Navigating through Number and Operations
the symbols $>$ , $=$ , and	and ones.	PK-2 Make a Match pp. 76-78
<.		
	3c.Use the symbols >, =, and <	3c. Scott Foresman Chapter 8 Lesson 8-7
	to record the results of	
	comparing two two-digit	
	numbers.	
Use place value	Use place value	
nroperties of	of operations to add and	
operations to add	subtract.	
and subtract.	Subtraction	
4. Add within 100,	4a. Add a two-digit number and	4a. <u>Scott Foresman</u> Chapter 12 Lesson 12-4
including adding a	a one-digit number within 100.	4a. Zeroing In: Modeling Addition and Subtraction
two-digit number and		(modify so students stop at 100)
a one-digit number,	4b. Add a two-digit number and	4b. <u>Scott Foresman</u> Chapter 12 Lesson 12-2
and adding a two-	a multiple of 10 within 100.	
digit number and a	4c. Explain the reasoning used	
multiple of 10, using	to add two-digit numbers within	
concrete models or	100.	
drawings and	4d. Relate the reasoning to a	
strategies based on	written method $(22+7 = 20+2+7)$	
place value,	= 20+9 = 29)	
properties of	4e. Understand that in adding	4e.Zeroing In: Modeling Addition and Subtraction

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

	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
	Teen Number Concentration pp. 46-47
	Race for a Dollar pp 48-49
	High-Low pp 50-51
	Lu Lu nn 52-53
	Lu Lu pp. 52 55
DTI I	nterventions
OCM	(Oral Counting)
	OCM Count aloud with others (say the
1.	forward number word sequence)
n	OCM Count objects with monitoring
2. 2	OCM Count objects with monitoring.
3.	OCM Touch one-say one with peer of
	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
	datarmina how many more/loss
	ucici nine now 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

onto ten-frames to support the conceptual understanding of teens numbers).
o. UCIN ASK student to count on or count back from any number
9. <b>OCM. M-CBM</b> 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. <b>OCM</b> 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.
evtras) first counting by tens, then
counting on the extras by ones
13 <b>OCM</b> 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. UCM, M-CBM, M-CAP Count on for addition Have the student equat 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.
NIM (Number Identification)
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
numbers (connect number numes,

<ul> <li>18. NIM, QDM Match sets of objects in teens with the written numeral, and word form (connect number names, numerals, and quantity representatio</li> <li>19. NIM, QDM Connect numerals, qua and word-form by making posters an booklets.</li> <li>20. OCM, NIM Student grabs a handfi small objects and then counts to find many. Given a hundred chart, stude places the objects one-by-one on the numbers.</li> <li>21. NIM Use a deck of number cards 0 with corresponding quantities shown Draw a card and ask the student to n The student may count the objects in necessary to help name the number. naming, the student should place the number in a row in order (cards with on the left, then ones, etc.). Having numbers in order may also help the identify and name the numeral.</li> <li>22. OCM, NIM, QDM Using a die wit numbers (numbers can vary dependit the skill of the student on the skill of the student and a group objects, the student rolls the die, say number, and takes out of the group to many objects. The teacher or anoth student does the same. Each person say whether he or she has more or le the other person. Without putting the objects back, the first student takes at turn (roll, say, count out) and adds ti amount to the first amount. After the anset.</li> </ul>	the ay the ). tity, 1 of how t 10 me it. After
<ul> <li>teens with the written numeral, and word form (connect number names, numerals, and quantity representation 19. NIM, QDM Connect numerals, quater and word-form by making posters and booklets.</li> <li>20. OCM, NIM Student grabs a handfi small objects and then counts to find many. Given a hundred chart, stude places the objects one-by-one on the numbers.</li> <li>21. NIM Use a deck of number cards 0 with corresponding quantities shown Draw a card and ask the student to n The student may count the objects in necessary to help name the number. naming, the student should place the number in a row in order (cards with on the left, then ones, etc.). Having numbers in order may also help the identify and name the numeral.</li> <li>22. OCM, NIM, QDM Using a die with numbers (numbers can vary dependit the skill of the student rolls the die, say number, and takes out of the group the student does the same. Each person say whether he or she has more or le the other person. Without putting the objects she student takes a turn (roll, say, count out) and ads the amount to the first amount. After the student of the student amount on the student takes a turn (roll, say, count out) and ads the amount to the first amount. After the student context amount to the first amount. After the student context amount to the first amount. After the student context amount context amount. After the student context amount context a</li></ul>	ay the ). tity, 1 of how t 10 me it. After
<ul> <li>been with the written numeral, and word form (connect number names, numerals, and quantity representation</li> <li>19. NIM, QDM Connect numerals, qua and word-form by making posters an booklets.</li> <li>20. OCM, NIM Student grabs a handfi small objects and then counts to find many. Given a hundred chart, stude places the objects one-by-one on the numbers.</li> <li>21. NIM Use a deck of number cards 0 with corresponding quantities shown Draw a card and ask the student to n The student may count the objects with numbers in a row in order (cards with on the left, then ones, etc.). Having numbers in order may also help the identify and name the number.</li> <li>22. OCM, NIM, QDM Using a die with numbers (numbers can vary dependithe skill of the student rolls the die, say number, and takes out of the group to many objects. The teacher or anothe student does the same. Each person say whether he or she has more or le the other person. Without putting the objects back, the first student takes a turn (roll, say, count out) and adds tt amount to the first amount. After the additional participants and the stage of the student takes a turn (roll, say, count out) and adds tt amount to the first amount. After the student takes a turn (roll, say, count out) and adds tt amount to the first amount.</li> </ul>	). tity, 1 of how t 10 me it. After
<ul> <li>word form (connect number names, numerals, and quantity representatio</li> <li>19. NIM, QDM Connect numerals, qua and word-form by making posters are booklets.</li> <li>20. OCM, NIM Student grabs a handfi small objects and then counts to find many. Given a hundred chart, stude places the objects one-by-one on the numbers.</li> <li>21. NIM Use a deck of number cards 0 with corresponding quantities shown Draw a card and ask the student to on The student may count the objects if necessary to help name the number. naming, the student should place the number in a row in order (cards with on the left, then ones, etc.). Having numbers in order may also help the sidentify and name the numeral.</li> <li>22. OCM, NIM, QDM Using a die with numbers, and takes out of the group the skill of the student rolls the die, say number, and takes out of the group objects. The teacher or anothe student does the same. Each person say whether he or she has more or le the other person. Without putting the objects back, the first student takes a turn (roll, say, count out) and adds the anount to the first amount. After the anount is the dire state and the state an</li></ul>	). tity, d of how t 10 me it. After
<ul> <li>numerals, and quantity representatio</li> <li>19. NIM, QDM Connect numerals, qua and word-form by making posters an booklets.</li> <li>20. OCM, NIM Student grabs a handfi small objects and then counts to finc many. Given a hundred chart, stude places the objects one-by-one on the numbers.</li> <li>21. NIM Use a deck of number cards 0 with corresponding quantities shown Draw a card and ask the student to n The student may count the objects if necessary to help name the number. naming, the student should place the numbers in order may also help the identify and name the numeral.</li> <li>22. OCM, NIM, QDM Using a die wit numbers (numbers can vary dependi the skill of the student rolls the die, say number, and takes out of the group t many objects. The teacher or anothe student does the same. Each person say whether he or she has more or le the other person. Without putting th objects back, the first student takes a turn (roll, say, count out) and adds t</li> </ul>	). tity, d of how t 10 me it. After
<ul> <li>19. NIM, QDM Connect numerals, qua and word-form by making posters at booklets.</li> <li>20. OCM, NIM Student grabs a handfu small objects and then counts to find many. Given a hundred chart, stude places the objects one-by-one on the numbers.</li> <li>21. NIM Use a deck of number cards 0 with corresponding quantities shown Draw a card and ask the student to n The student may count the objects if necessary to help name the number. naming, the student should place the number in a row in order (cards with on the left, then ones, etc.). Having numbers in order may also help the sidentify and name the numeral.</li> <li>22. OCM, NIM, QDM Using a die wit numbers (numbers can vary dependithe skill of the student) and a group objects, the student rolls the die, say number, and takes out of the group to many objects. The teacher or anothe student does the same. Each person say whether he or she has more or le the other person. Without putting the objects back, the first student takes a turn (roll, say, count out) and adds ti amount to the first amount. After the student of the student tames a student of the student takes a sturn (roll, say, count out) and adds ti amount to the first amount. After the student of the student takes a sturn (roll, say, count out) and adds to amount to the first amount.</li> </ul>	tity, d of how t 10 me it. After
<ul> <li>19. TMP, QDM Connect numerals, quarter and word-form by making posters at booklets.</li> <li>20. OCM, NIM Student grabs a handfi small objects and then counts to find many. Given a hundred chart, stude places the objects one-by-one on the numbers.</li> <li>21. NIM Use a deck of number cards 0 with corresponding quantities shown Draw a card and ask the student to n The student may count the objects if necessary to help name the number. naming, the student should place the number in a row in order (cards with on the left, then ones, etc.). Having numbers in order may also help the identify and name the numeral.</li> <li>22. OCM, NIM, QDM Using a die wit numbers (numbers can vary dependit the skill of the student 1) and a group objects, the student rolls the die, say number, and takes out of the group to many objects. The teacher or anoth student does the same. Each person say whether he or she has more or le the other person. Without putting th objects back, the first student takes a turn (roll, say, count out) and adds ti amount to the first amount. After the student othe first amount.</li> </ul>	d of how t 10 me it. After
<ul> <li>and word-form by making posters at booklets.</li> <li>20. OCM, NIM Student grabs a handfi small objects and then counts to find many. Given a hundred chart, stude places the objects one-by-one on the numbers.</li> <li>21. NIM Use a deck of number cards 0 with corresponding quantities shown Draw a card and ask the student to n The student may count the objects if necessary to help name the number. naming, the student should place the number in a row in order (cards with on the left, then ones, etc.). Having numbers in order may also help the identify and name the numeral.</li> <li>22. OCM, NIM, QDM Using a die wit numbers (numbers can vary dependit the skill of the student rolls the die, say number, and takes out of the group objects. The teacher or anoth student does the same. Each person say whether he or she has more or le the other person. Without putting th objects back, the first student takes a turn (roll, say, count out) and adds the amount to the first amount. After the other person.</li> </ul>	of how t 10 me it. After
<ul> <li>booklets.</li> <li>20. OCM, NIM Student grabs a handft small objects and then counts to find many. Given a hundred chart, stude places the objects one-by-one on the numbers.</li> <li>21. NIM Use a deck of number cards 0 with corresponding quantities shown Draw a card and ask the student to n The student may count the objects if necessary to help name the number. naming, the student should place the number in a row in order (cards with on the left, then ones, etc.). Having numbers in order may also help the s- identify and name the numeral.</li> <li>22. OCM, NIM, QDM Using a die wit numbers (numbers can vary dependi the skill of the student) and a group objects, the student rolls the die, say number, and takes out of the group t many objects. The teacher or anoth student does the same. Each person say whether he or she has more or le the other person. Without putting th objects back, the first student takes a turn (roll, say, count out) and adds tf amount to the first amount. After th</li> </ul>	of how t 10 me it. After
<ul> <li>20. OCM, NIM Student grabs a handfu small objects and then counts to find many. Given a hundred chart, stude places the objects one-by-one on the numbers.</li> <li>21. NIM Use a deck of number cards 0 with corresponding quantities shown Draw a card and ask the student to n The student may count the objects if necessary to help name the number. naming, the student should place the number in a row in order (cards with on the left, then ones, etc.). Having numbers in order may also help the sidentify and name the numeral.</li> <li>22. OCM, NIM, QDM Using a die with number; numbers can vary dependit the skill of the student rolls the die, say number, and takes out of the group to many objects. The teacher or anothe student does the same. Each person say whether he or she has more or le the other person. Without putting the objects back, the first student takes at turn (roll, say, count out) and adds the amount to the first amount. After the student to the first amount.</li> </ul>	of how t 10 me it. After
<ul> <li>a small objects and then counts to find many. Given a hundred chart, stude places the objects one-by-one on the numbers.</li> <li>21. NIM Use a deck of number cards 0 with corresponding quantities shown Draw a card and ask the student to n The student may count the objects if necessary to help name the number. naming, the student should place the number in a row in order (cards with on the left, then ones, etc.). Having numbers in order may also help the sidentify and name the numeral.</li> <li>22. OCM, NIM, QDM Using a die witt numbers (numbers can vary dependit the skill of the student rolls the die, say number, and takes out of the group t many objects. The teacher or anothe student does the same. Each person say whether he or she has more or le the other person. Without putting the objects back, the first student takes a turn (roll, say, count out) and adds ti amount to the first amount. After the student of the student takes a turn (roll, say, count out) and adds</li> </ul>	how t 10 me it. After
<ul> <li>sinal objects and the counts to thic many. Given a hundred chart, stude places the objects one-by-one on the numbers.</li> <li>21. NIM Use a deck of number cards 0 with corresponding quantities shown Draw a card and ask the student to n The student may count the objects if necessary to help name the number. naming, the student should place the number in a row in order (cards with on the left, then ones, etc.). Having numbers in order may also help the sidentify and name the numeral.</li> <li>22. OCM, NIM, QDM Using a die wit numbers (numbers can vary dependit the skill of the student rolls the die, say number, and takes out of the group to many objects. The teacher or anothe student does the same. Each person say whether he or she has more or le the other person. Without putting the objects back, the first student takes at turn (roll, say, count out) and adds the amount to the first amount. After the another is the student of the student takes at turn (roll, say, count out) and adds the student of the student takes at turn (roll, say, count out) and adds the student of the student takes at turn (roll, say, count out) and adds the student of the student takes at turn (roll, say, count out) and adds the student of the student takes at turn (roll, say, count out) and student takes at turn (roll, say, count out) and such takes at turn (roll, say, count out) and such takes at turn (roll, say, count out) and such takes at turn (roll, say, count out) and such takes at turn (roll, say, count out) and such takes at turn (roll, say, count out) and such takes at turn (roll, say, count out) and such takes at turn (roll, say, count out) and such takes at turn (roll, say, count out) and such takes at turn (roll, say, count out) and such takes at turn (roll, say, count out) and such takes at turn (roll, say, count out) and such takes at turn (roll, say, count out) and such takes at turn (roll, say, count out) and such takes at turn (roll, say, count out) and such takes at turn (roll, say, count out) and such takes at</li></ul>	t 10 me it. After
<ul> <li>many. Given a hundred chart, stude places the objects one-by-one on the numbers.</li> <li>21. NIM Use a deck of number cards 0 with corresponding quantities shown Draw a card and ask the student to n The student may count the objects if necessary to help name the number. naming, the student should place the number in a row in order (cards with on the left, then ones, etc.). Having numbers in order may also help the sidentify and name the numeral.</li> <li>22. OCM, NIM, QDM Using a die wit numbers (numbers can vary dependithe skill of the student rolls the die, say number, and takes out of the group t many objects. The teacher or anothe student does the same. Each person say whether he or she has more or le the other person. Without putting the objects back, the first student takes a turn (roll, say, count out) and adds the amount to the first amount. After the student of the student of the student and adds the student of the student and adds the student to the first amount. After the other person is a student of the student of the student and adds the student of the student and adds the student of the student and adds the other person.</li> </ul>	t 10 me it. After
<ul> <li>places the objects one-by-one on the numbers.</li> <li>21. NIM Use a deck of number cards 0 with corresponding quantities shown Draw a card and ask the student to n The student may count the objects if necessary to help name the number. naming, the student should place the number in a row in order (cards with on the left, then ones, etc.). Having numbers in order may also help the : identify and name the numeral.</li> <li>22. OCM, NIM, QDM Using a die wit numbers (numbers can vary dependit the skill of the student rolls the die, say number, and takes out of the group t many objects. The teacher or anothe student does the same. Each person say whether he or she has more or le the other person. Without putting the objects back, the first student takes a turn (roll, say, count out) and adds ta amount to the first amount. After the student of the student amount.</li> </ul>	10 me it. After
<ul> <li>numbers.</li> <li>21. NIM Use a deck of number cards 0 with corresponding quantities shown Draw a card and ask the student to n The student may count the objects if necessary to help name the number. naming, the student should place the number in a row in order (cards with on the left, then ones, etc.). Having numbers in order may also help the sidentify and name the numeral.</li> <li>22. OCM, NIM, QDM Using a die wit numbers (numbers can vary dependithe skill of the student rolls the die, say number, and takes out of the group to many objects. The teacher or anothe student does the same. Each person say whether he or she has more or le the other person. Without putting the objects back, the first student takes at turn (roll, say, count out) and adds tt amount to the first amount. After the</li> </ul>	10 me it. After
<ul> <li>21. NIM Use a deck of number cards 0 with corresponding quantities shown Draw a card and ask the student to m The student may count the objects if necessary to help name the number. naming, the student should place the number in a row in order (cards with on the left, then ones, etc.). Having numbers in order may also help the sidentify and name the numeral.</li> <li>22. OCM, NIM, QDM Using a die wit numbers (numbers can vary dependit the skill of the student) and a group objects, the student rolls the die, say number, and takes out of the group t many objects. The teacher or anothe student does the same. Each person say whether he or she has more or le the other person. Without putting th objects back, the first student takes at turn (roll, say, count out) and adds the amount to the first amount. After the other person without putting the other person.</li> </ul>	10 me it. After
<ul> <li>21. NIM Use a deck of number cards 0 with corresponding quantities shown Draw a card and ask the student to m The student may count the objects if necessary to help name the number. naming, the student should place the number in a row in order (cards with on the left, then ones, etc.). Having numbers in order may also help the sidentify and name the numeral.</li> <li>22. OCM, NIM, QDM Using a die wit numbers (numbers can vary dependit the skill of the student) and a group objects, the student rolls the die, say number, and takes out of the group t many objects. The teacher or anothe student does the same. Each person say whether he or she has more or le the other person. Without putting the objects back, the first student takes a turn (roll, say, count out) and adds the amount to the first amount. After the student to the student amount.</li> </ul>	me it. After
<ul> <li>with corresponding quantities shown Draw a card and ask the student to n The student may count the objects if necessary to help name the number. naming, the student should place the number in a row in order (cards with on the left, then ones, etc.). Having numbers in order may also help the identify and name the numeral.</li> <li>22. OCM, NIM, QDM Using a die wit numbers (numbers can vary dependi the skill of the student) and a group objects, the student rolls the die, say number, and takes out of the group t many objects. The teacher or anothe student does the same. Each person say whether he or she has more or le the other person. Without putting th objects back, the first student takes a turn (roll, say, count out) and adds tf amount to the first amount. After th</li> </ul>	me it. After
<ul> <li>Draw a card and ask the student to m The student may count the objects if necessary to help name the number. naming, the student should place the number in a row in order (cards with on the left, then ones, etc.). Having numbers in order may also help the identify and name the numeral.</li> <li><b>22. OCM, NIM, QDM</b> Using a die wit numbers (numbers can vary dependi the skill of the student) and a group objects, the student rolls the die, say number, and takes out of the group t many objects. The teacher or another student does the same. Each person say whether he or she has more or le the other person. Without putting th objects back, the first student takes a turn (roll, say, count out) and adds tf amount to the first amount. After th</li> </ul>	me it. After
<ul> <li>The student may count the objects if necessary to help name the number. naming, the student should place the number in a row in order (cards with on the left, then ones, etc.). Having numbers in order may also help the sidentify and name the numeral.</li> <li>22. OCM, NIM, QDM Using a die wit numbers (numbers can vary dependit the skill of the student) and a group objects, the student rolls the die, say number, and takes out of the group t many objects. The teacher or another student does the same. Each person say whether he or she has more or left the other person. Without putting the objects back, the first student takes at turn (roll, say, count out) and adds the amount to the first amount. After the student count and the student and the student again and the student takes at amount to the first amount. After the student to the student and the student and the student and the student takes at amount to the first amount.</li> </ul>	After
<ul> <li>necessary to help name the number. naming, the student should place the number in a row in order (cards with on the left, then ones, etc.). Having numbers in order may also help the identify and name the numeral.</li> <li>22. OCM, NIM, QDM Using a die wit numbers (numbers can vary dependi the skill of the student) and a group objects, the student rolls the die, say number, and takes out of the group t many objects. The teacher or anothe student does the same. Each person say whether he or she has more or le the other person. Without putting th objects back, the first student takes a turn (roll, say, count out) and adds th amount to the first amount. After th</li> </ul>	After
<ul> <li>necessary to help name the number. naming, the student should place the number in a row in order (cards with on the left, then ones, etc.). Having numbers in order may also help the identify and name the numeral.</li> <li>22. OCM, NIM, QDM Using a die wit numbers (numbers can vary dependi the skill of the student) and a group objects, the student rolls the die, say number, and takes out of the group t many objects. The teacher or anothe student does the same. Each person say whether he or she has more or le the other person. Without putting th objects back, the first student takes a turn (roll, say, count out) and adds th amount to the first amount. After th</li> </ul>	Atter
<ul> <li>naming, the student should place the number in a row in order (cards with on the left, then ones, etc.). Having numbers in order may also help the sidentify and name the numeral.</li> <li>22. OCM, NIM, QDM Using a die wit numbers (numbers can vary dependit the skill of the student) and a group objects, the student rolls the die, say number, and takes out of the group to many objects. The teacher or another student does the same. Each person say whether he or she has more or le the other person. Without putting the objects back, the first student takes a turn (roll, say, count out) and adds the amount to the first amount. After the discussion of the student of the student to the first amount. After the discussion of the student to the first amount.</li> </ul>	
<ul> <li>number in a row in order (cards with on the left, then ones, etc.). Having numbers in order may also help the sidentify and name the numeral.</li> <li>22. OCM, NIM, QDM Using a die with numbers (numbers can vary dependit the skill of the student) and a group objects, the student rolls the die, say number, and takes out of the group t many objects. The teacher or anothe student does the same. Each person say whether he or she has more or let the other person. Without putting th objects back, the first student takes a turn (roll, say, count out) and adds the amount to the first amount. After the discussion of the student is the student of the student takes a turn (roll, say, count out).</li> </ul>	
<ul> <li>on the left, then ones, etc.). Having numbers in order may also help the sidentify and name the numeral.</li> <li>22. OCM, NIM, QDM Using a die with numbers (numbers can vary dependit the skill of the student) and a group objects, the student rolls the die, say number, and takes out of the group t many objects. The teacher or anothe student does the same. Each person say whether he or she has more or le the other person. Without putting the objects back, the first student takes a turn (roll, say, count out) and adds the amount to the first amount. After the other person without putting the objects back.</li> </ul>	zero
<ul> <li>a control for the first student takes at turn (roll, say, count out) and adds tf amount to the first amount. After the</li> </ul>	he
<ul> <li>numbers in order may also help the sidentify and name the numeral.</li> <li>22. OCM, NIM, QDM Using a die wit numbers (numbers can vary dependit the skill of the student) and a group objects, the student rolls the die, say number, and takes out of the group t many objects. The teacher or another student does the same. Each person say whether he or she has more or let the other person. Without putting the objects back, the first student takes a turn (roll, say, count out) and adds the amount to the first amount. After the student is the student of the student.</li> </ul>	1
<ul> <li>identify and name the numeral.</li> <li>22. OCM, NIM, QDM Using a die with numbers (numbers can vary dependit the skill of the student) and a group objects, the student rolls the die, say number, and takes out of the group t many objects. The teacher or anothe student does the same. Each person say whether he or she has more or let the other person. Without putting the objects back, the first student takes a turn (roll, say, count out) and adds the amount to the first amount. After the distance of the student is the same of the student takes a start of the start and takes a start and takes a start and takes a start and takes a</li></ul>	udent
22. OCM, NIM, QDM Using a die wit numbers (numbers can vary dependi the skill of the student) and a group objects, the student rolls the die, say number, and takes out of the group t many objects. The teacher or anothe student does the same. Each person say whether he or she has more or le the other person. Without putting th objects back, the first student takes a turn (roll, say, count out) and adds th amount to the first amount. After th	
numbers (numbers can vary dependit the skill of the student) and a group objects, the student rolls the die, say number, and takes out of the group t many objects. The teacher or anothe student does the same. Each person say whether he or she has more or le the other person. Without putting th objects back, the first student takes a turn (roll, say, count out) and adds th amount to the first amount. After th	
the skill of the student) and a group objects, the student rolls the die, say number, and takes out of the group t many objects. The teacher or anothe student does the same. Each person say whether he or she has more or le the other person. Without putting th objects back, the first student takes a turn (roll, say, count out) and adds th amount to the first amount. After th	a on
the skill of the student) and a group objects, the student rolls the die, say number, and takes out of the group t many objects. The teacher or anothe student does the same. Each person say whether he or she has more or le the other person. Without putting th objects back, the first student takes a turn (roll, say, count out) and adds th amount to the first amount. After th	g on
objects, the student rolls the die, say number, and takes out of the group t many objects. The teacher or anothe student does the same. Each person say whether he or she has more or le the other person. Without putting th objects back, the first student takes a turn (roll, say, count out) and adds th amount to the first amount. After th	1
number, and takes out of the group t many objects. The teacher or anothe student does the same. Each person say whether he or she has more or le the other person. Without putting th objects back, the first student takes a turn (roll, say, count out) and adds th amount to the first amount. After th	the
many objects. The teacher or another student does the same. Each person say whether he or she has more or le the other person. Without putting the objects back, the first student takes a turn (roll, say, count out) and adds the amount to the first amount. After the	at
student does the same. Each person say whether he or she has more or le the other person. Without putting th objects back, the first student takes a turn (roll, say, count out) and adds th amount to the first amount. After th	•
student does the same. Each person say whether he or she has more or le the other person. Without putting th objects back, the first student takes a turn (roll, say, count out) and adds th amount to the first amount. After th	1 11
say whether he or she has more or le the other person. Without putting th objects back, the first student takes a turn (roll, say, count out) and adds th amount to the first amount. After th	hould
the other person. Without putting the objects back, the first student takes a turn (roll, say, count out) and adds the amount to the first amount. After the first amount to the first amount.	s than
objects back, the first student takes a turn (roll, say, count out) and adds th amount to the first amount. After th	
turn (roll, say, count out) and adds th amount to the first amount. After th	other
turn (roll, say, count out) and adds the amount to the first amount. After the	ionici
amount to the first amount. After th	e new
second person goes, each determines	and
then states whether he or she has mo	e or
	0.01
less than the other person. As an	
extension, the amounts can be lined	р
side-by-side so that the student can	
determine how many more/less	
$\begin{array}{c} \text{uccommod} \text{ norm} $	ما م ط
23. <b>NIVI</b> Use a number line and a die la	elea
1, 1, 2, 2, 3, 3. Student rolls the die	
moves that many spaces, starting at	nd
Δ fter the student finishes moving h	nd ero.
	nd ero. 'she
says the number. If correct, another	nd ero. 'she
may be taken. Play as a game.	nd ero. 'she urn
24. <b>NIM, ODM</b> Say word forms while	nd ero. ′she urn
	nd ero. 'she urn

<ul> <li>touching numerals or quantities (connect quantity with number word forms).</li> <li>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.</li> </ul>
<ul> <li>MNM (Missing Number)</li> <li>1. MNM Fill in missing numbers in sequence, especially using number lines for visual support.</li> <li>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.</li> <li>3. MNM, M-CBM, M-CAP Ask student to find ten more or ten less than a number.</li> </ul>
<ul> <li>QDM (Quantity Discrimination)</li> <li>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.</li> <li>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.</li> <li>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</li> </ul>
explaining that the number doesn't change



(ones).
Operations and Algebraic Thinking M-CBM 15. <b>OCM, M-CBM</b> With a small group of students, the first student begins counting, the next continues from where the first stops, etc.
<ul> <li>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).</li> <li>17. M-CBM Use part/part/whole mats or representations to assist with adding and subtracting.</li> <li>18. M-CBM Count by 10's starting with a number loss than 10. Use base 10 blocks</li> </ul>
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. <b>M-CBM, M-CAP</b> 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. <b>M-CBM</b> Teach the student that the "+" sign means put together and the "-" sign means separate. Model with objects to
help explain. 22. <b>M-CBM, M-CAP</b> 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

	<ul> <li>track of how many numbers he says by using fingers. Identify or write appropriate equations.</li> <li>23. MNM, M-CBM, M-CAP Ask student to find one more or one less than a number.</li> <li>24. MNM, M-CBM, M-CAP Ask student to find ten more or ten less than a number.</li> <li>25. M-CBM Use fingers and tens frames cards to find combinations of ten. Ask, "How many more make ten?"</li> <li>26. M-CBM Play the games, "Number Island" and "Block Out Ten" to support combinations of ten.</li> <li>27. M-CBM Play the game, "The Game of Tens and Ones" to support addition/subtraction of one and ten.</li> <li>28. M-CBM Two-Fisted Pennies Game (RTI folder)</li> <li>29. M-CBM Addition Top-It (RTI folder)</li> </ul>

## 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	RSU 54/MSAD 54	Instructional
State Standards	Objectives	<b>Resources/Activities</b>
Measure lengths indirectly and by iterating length units	Measure lengths indirectly and by iterating length units	
1. Order three objects by length; compare the lengths of two objects indirectly by using a third object.	<ul><li>1a. Put three objects in order by length.</li><li>1b. Determine longer/shorter by comparing objects to a third object.</li></ul>	<ul> <li>1a. <u>Navigating through Measurement PK-2</u> <i>Ribbon Heights</i> pp. 24-26</li> <li>1b. <u>Navigating through Measurement PK-2</u> <i>Ribbon Heights</i> pp. 24-26</li> </ul>
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</i> <i>where the object</i> <i>being measured is</i> <i>spanned by a whole</i> <i>number of length</i> <i>units with no gaps of</i> <i>overlaps.</i>	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.	2a. <u>Scott Foresman</u> Chapter 10 lesson 10-1 and 10-2 2a. <u>Navigating through Measurement PK-2</u> <i>Snake</i> <i>Imprints</i> pp. 37-40 (modify using paper strips), <i>Grandma</i> pp. 49-51
Tell and write time.	Tell and write time.	
3. Tell and write time in hours and half- hours using analog and digital clocks.	3a. Identify the hour hand, the minute hand and their functions.	3a. <u>Scott Foresman</u> Chapter 6, lesson 6-2 Literature Connection: <u>The Grouchy Ladybug</u> Eric Carle

	<ul><li>3b. Tell and write to the hour on an analog and digital clock.</li><li>3c. Tell and write time to the half hour on an analog and digital clock.</li></ul>	3b. Scott Foresman Chapter 6 lesson 6-3Literature Connection:The Grouchy LadybugEric Carle3c. Scott Foresman Chapter 6 lesson 6-4Literature Connection:The Grouchy LadybugEric Carle
Represent and interpret data.	Represent and interpret data.	
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.	<ul> <li>4a. Collect data and organize into real graphs, picture graphs, bar graphs, tables, charts, and line plots with up to three categories.</li> <li>4b. Formulate and answer questions based on the data.</li> </ul>	<ul> <li>4a. Scott Foresman Chapter 8 sec. C</li> <li>4a. Navigating through Data Analysis and Probability PK-2 Families pp. 30-32, Row Your Boat pp. 33-35, Mystery Graphs pp. 50-52</li> <li>4b. Scott Foresman Chapter 8 sec. C</li> <li>4b. Navigating through Data Analysis and Probability PK-2 Families pp. 30-32, Row Your Boat pp. 33-35, Mystery Graphs pp. 50-52</li> <li>Literature Connections Chrysanthemum by Kevin Henkes Clocks and More Clocks by Pat Hutchins How Big is a Foot? By Rolf Myller Much Bigger than Martin by Steven Kellogg</li> </ul>

## RSU 54/MSAD 54 Math Curriculum

Content Area: Math Unit: Geometry Grade: Grade 1

# Common Core State Standards Domain: Geometry

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

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