Grade Level	Content Area	Course Title *(For 9-12 Samples Only)*	Unit Title
3rd grade	Mathematics		Multiplication groups

Length of Unit	Time of Year Taught	Expected Prior Knowledge
5 days- 60 minutes/day	1st quarter	Number and Operations in Base Ten Use place value understanding and properties of operations to perform multi-digit arithmetic 3.NBT.1. Use place value understanding to round whole numbers to the nearest 10 or 100. 3.NBT.2. Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction. 3.NBT.3. Multiply one-digit whole numbers by multiples of 10 in the range 10–90 (e.g., 9 × 80, 5 × 60) using strategies based on place value and properties of operations.

Unit Description: Students will interpret products of whole numbers as a total number of objects in groups. Students will use different manipulatives to discover this standard. Students will gain a deeper understanding of multiplication and work in groups to figure out different products. Students will be assessed using drawings.

Standards: See instructions on page 15.	Operations and Algebraic Thinking Represent and solve problems involving multiplication and division**.** 3-1. Interpret products of whole numbers, e.g., interpret 5 × 7 as the total number of objects in 5 groups of 7 objects each. *For example, describe a context in which a total number of objects can be expressed as 5 × 7.*
Summative Assessment *In addition to the description, include a copy of the summative assessment in the application package.*	Students will be assessed with a 10 point quiz that will have them draw products in groups.
Scoring for Summative Assessment *In addition to the description, include a copy of the answer key and scoring rubric (if applicable) for the summative assessment in the application package.*	Each correct answer is worth 1 point. Questions 1-4 are worth one point each and questions 5-7 are worth two points each for a total of ten points. Students will demonstrate mastery by scoring a seven out of 10 on the assessment which is a 70%.
Materials/Resources Needed *Include all items for the entire unit.*	White boards, pretzels, m&ms, goldfish crackers, student journals, overhead/projector, assessment

	Lesson 1	Lesson 2	Lesson 3	Lesson 4	Lesson 5

Instruction and Timeline	Objective: Students will interpret products of whole numbers, e.g., interpret 5x7 as the total number of objects in 5 groups of 7 objects each. Anticipatory Set: Read “100 Hungry Ants” By Elinor J. Pinczes. Draw 10 hungry ants marching in equal rows, on your white boards. Instructional input/Modeling: Using overhead manipulatives, on the overhead display 20 circles. Explain that we will begin exploring multiplication by examining numbers of objects in groups. Model placing 5 objects in 4 groups. Think aloud how these could be ants in rows or clusters or piles. Show each way – counting to 20 each time. Rearrange to 5 groups of 4 objects. Discuss. Rearrange 2 groups of 10 and 10 groups of 2. Count to demonstrate that total number stays	Objective: Students will interpret products of whole numbers, e.g., interpret 5x7 as the total number of objects in 5 groups of 7 objects each Anticipatory Set: Show me 15 ants in 3 equal groups, on your white boards. Instructional input/Modeling: Using overhead manipulatives, display18 circles. Model arranging the circles in 3 groups of 6. Model writing, 18 is 3 groups of 6. Repeat with18 is 6 groups of 3, 18 is 2 groups of 9, 18 is 9 groups of 2, 18 is 1 group of 18 and 18 is 18 groups of 1. Count in between each demonstration to reiterate that 18 remains the total. Guided Practice: Give groups 16 unifix cubes. Ask students to place the cubes into equal groups. Students will write the sentence 16 is _ groups of _ on a paper. Students should repeat the process exploring grouping possibilities and writing sentences. After each grouping, students should count total to confirm that the total number is	Objective: Students will interpret products of whole numbers, e.g., interpret 5x7 as the total number of objects in 5 groups of 7 objects each Anticipatory Set: Show me 35 ants in equal groups, on your white boards. Instructional input/Modeling: Using overhead manipulatives, display 35 circles. Model arranging the circles in 5 groups of 7. Model writing, 35=5x7 Total (35) is(5) groups of (7) in each group. Repeat with other factors for 35 Guided Practice: Give groups 42 counters. Ask students to place the counters into equal groups. Students will write the equation to match the demonstrated groups, using the pattern TOTAL= GROUPS X NUMBER IN EACH GROUP. Students should repeat the process exploring grouping possibilities and writing equations. After each grouping students should count total to confirm	Objective: Students will interpret products of whole numbers, e.g., interpret 5x7 as the total number of objects in 5 groups of 7 objects each Anticipatory Set: Yesterday I saw 3 rows marching ants, with 3 ants in each row. Draw a picture of what I saw on your white boards. Instructional input/Modeling: Using overhead graph paper, show a shape with 6 by 5 dimensions. Model counting groups/rows and writing the number next to the shape. Modeling counting how many squares in each row and writing the number next to the shape as you would label dimensions). 5x6 = Model counting and writing total number of squares. 5x6=30 Discuss how this compares to previous lessons. Explain that this time we started with groups and number in each group to discover the total. Guided Practice:	Objective: Students will interpret products of whole numbers, e.g., interpret 5x7 as the total number of objects in 5 groups of 7 objects each Anticipatory Set: Show picture of 4 rows of flowers with 7 flowers in each row. Write an equation to match this picture on your white board. Instructional input/Modeling: Student will complete assessment. Closure: Review a part of assessment.

	the same. Guided Practice: Give groups 24 unifix cubes. Ask students to demonstrate. 8 groups of 3 3 groups of 8 12 group of 2 2 groups of 12 6 groups of 4 4 groups of 6 1 group of 24 24 groups of 1 After each grouping students should count the total to realize that the total number is consistent. Independent Practice: Write on board: 2 groups of 6 6 groups of 2 3 groups of 4 4 groups of 3 12 groups of 1 1 group of 12 Give each student 12 goldfish crackers. Students will use goldfish crackers to demonstrate total objects is groups times number in each group. Closure: Students will	consistent. Go over groupings as a class. Independent Practice: Give each student 14 pretzels. Students will put pretzels in equal groups. Students will write sentence to describe total is number of objects in number of groups, on white boards. Students will attempt to discover all grouping possibilities. Closure: Review student number sentences as a class.	that the total number is consistent. Go over groupings as a class. Independent Practice: Give each student 9 M&Ms. Students will put M&Ms in equal groups. Students will write equations to describe total = number of groups X number of objects in each group, on white boards. Students will attempt to discover all groupings possibilities. Closure: Review student equations as a class.	Give each table group a laminated sheet of graph paper with rectangles (with different dimensions) outlined on them. Students will count the groups/rows (label with vi sa vi marker) and count the squares in each row (label with vi sa vi marker). Students will count the total number of squares and record an equation using the pattern: Groups X Number of Squares in each Group = Total Number of Squares. Teacher will conference with each group. After conferencing with the teacher, students will wipe off laminated sheet and trade sheets with other groups. Repeat process. Independent Practice: Give each student a Hershey's chocolate bar. Students will count the number of groups/ rows and number of squares in each group and then the total number of squares.. Students will record the dimensions on their white boards, using the pattern: Groups X Number of Squares in each Group = Total Number of Squares.	

	use goldfish crackers to show one more problem.			Closure: review student equations.	

	Lesson 1	Lesson 2	Lesson 3	Lesson 4	Lesson 5
Student Activities and Timeline	Students read/listen to "100 Hungry Ants" By Elinor J. Pinczes. Students draw 10 hungry ants marching in equal rows, on your white boards. Students get 24 unifix cubes. Students demonstrate: 8 groups of 3 3 groups of 8 12 group of 2 2 groups of 12 6 groups of 4 4 groups of 2 1 group of 24 24 groups of 1 After each grouping students should count total to realize that the total number is consistent. Students write on board: 2 groups of 6 6 groups of 2 3 groups of 4 4 groups of 3 12 groups of 1 1 group of 12 Students will use goldfish crackers to demonstrate total objects	Students show 15 ants in 3 equal groups, on your white boards. Student groups use 16 unifix cubes. Ask students to place the cubes into equal groups. Students will write the sentence 16 is _ groups of _ on a paper. Students should repeat the process exploring grouping possibilities and writing sentences. After each grouping students should count total to confirm that the total number is consistent. Students get 14 pretzels. Students will put pretzels in equal groups. Students will write sentence to describe total is number of objects in number of groups, on white boards. Students will attempt to discover all grouping possibilities. Students review as a class.	Students show 35 ants in equal groups, on white boards. Groups get 42 counters. Students place the counters into equal groups. Students will write the equation to match the demonstrated groups, using the pattern TOTAL= GROUPS X NUMBER IN EACH GROUP. Students should repeat the process exploring grouping possibilities and writing equations. After each grouping students should count total to confirm that the total number is consistent. Students get 9 M&Ms. Students will put M&Ms in equal groups. Students will write equation to describe total = number of groups X number of objects in each group, on white boards. Students will attempt to discover all grouping	Students draw a picture on their white boards in response to the statement – " Yesterday I saw 3 rows marching ants, with 3 ants in each row. " Each group gets a laminated sheet of graph paper with rectangles (with different dimensions) outlined on them. Students will count the groups/rows (label with vi sa vi marker) and count the squares in each row (label with vi sa vi marker). Students will count the total number of squares and record an equation using the pattern: Groups X Number of Squares in each Group = Total Number of Squares. Students will conference with teacher. After conferencing with the teacher, students will wipe off laminated sheet and trade sheets with other group. Repeat process. Each students receives a Hershey's chocolate bar. Students will count the number of groups/ rows	Students will write an equation to match the picture of 4 rows of flowers with 7 flowers in each row. Student will complete assessment. Students will review a part of assessment.

	is groups times number in each group. Students will use goldfish crackers to show one more problem.		possibilities. Students review equations as a class.	and number of squares in each group and then the total number of squares.. Students will record the dimensions on their white boards, using the pattern: Groups X Number of Squares in each Group = Total Number of Squares. Students review equations.	

Name: _____Date: _____

Quiz:

Draw dots to match the following equations:

1. 2x6 2. 4x2 3. 3x4 4. 5x3

5. Draw 3 groups of 7 sticks. What is the total number of sticks?

6. Draw 2 groups of 8 balls. What is the total number of balls?

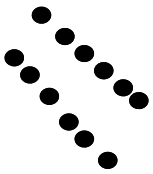
7. Draw a picture and solve the problem.

2x10= _____

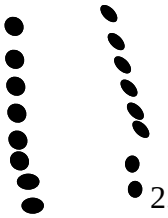
Name: _____Date: _____

Quiz: (Answer Key)

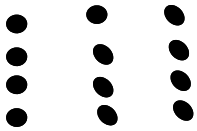
Draw dots to match the following equations:



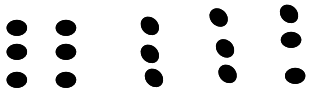
1. 2x6



2. 4 x2

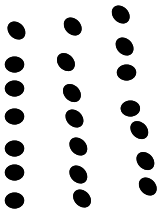


3. 3x4



4. 5x3

5. Draw 3 groups of 7 sticks. What is the total number of sticks? (2 pts.)



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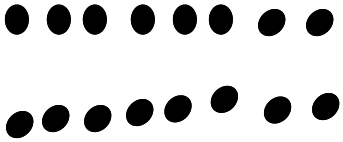
6. Draw 2 groups of 8 balls. What is the total number of balls? (2 pts.)



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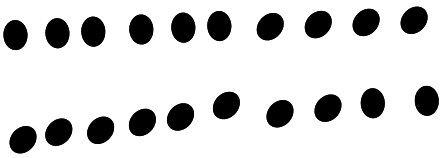
7. Draw a picture and solve the problem. (2 pts.)



2x10= __20_____

Score: _____/10

Each correct answer is worth 1 point. Questions 1-4 are worth one point each and questions 5-7 are worth two points (1 point for drawings and 1 point for correct total) each for a total of ten points. 7 out of 10 points is the minimum needed for mastery.

Number correct:	Percent:	
0-4	0% -49%	Falls Far Below
5-6	50%-69%	Approaches
7-10	70%-100%	Meets Mastery Level