

OA. Operations and Algebraic Thinking (insert standard or unit/theme)

Days	15	GRADE: 4	SUBJECT: Math
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				Assessment		
Standards (What do your students need to know?)	Learning Goals (What will your students be able to do?)	Vocab	Resources (What materials will you need?)	Pre Assessment (How will you assess what your students already know?)	Formative (How will you assess whether or not they are learning?)	Summative (How will you assess what they have learned?)
<p>4.OA.1 Interpret a multiplication equation as a comparison, e.g., interpret $35 = 5 \times 7$ as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations.</p>	<p>*Students will recognize that any two factors and their product can be read as a comparison (e.g., 8 is the same as 4 sets of 2 or 2 sets of 4; 8 is 4 times as many as 2, or 2 times as many as 4).</p> <p>*Students will recognize that multiplication represents groupings of numbers, and identify that the first factor in the equation represents the number of groups and the second factor represents how many within each group.</p> <p>*Students will make a comparison that 5 groups of 7 is the same as 7 groups of 5. Both products are 35.</p> <p>*Students will understand that this representation illustrates the Commutative Property of Multiplication.</p>	<p>multiply, compare, equation, represent, base ten, array, operation, factor, product, Commutative Property of Multiplication, expanded form, place value, decompose</p>	<p>P. 25-29 Saxon Math Textbook</p> <p>StudyIsland Gr.4 Stdrd – 4OA.1 quiz</p> <p>Number and Operations (Grades 3-5) Rectangle Multiplication—This virtual manipulative tool allows students to create arrays displaying different grouping (e.g., 3 groups of 6 and 6 groups of 3): http://nlvm.usu.edu/en/nav/topic_t_1.html</p>	<p>Saxon unit pre-assessment</p>	<p>*Weekly quizzes *mCLASS</p>	<p>*Unit Exam *Semester Exam *ISTEP</p>

Activities (How will you teach the lesson?)

Whole Group Instruction (Tier 1)	Remediation (tier 2)	Enrichment	Teacher Tips
<p>1. Concrete—Pictorial—Abstract Representation</p> <p>a. Have students use manipulatives to show what x groups of y looks like (e.g., 3 groups of 5; 4 groups of 7). Solve for the product.</p> <p>b. Build arrays for equations using the Commutative Property of Multiplication (e.g., with 5 groups of 7 and 7 groups of 5, 5 rows with 7 chairs in each row looks different from 7 rows with 5 chairs in each row, but there are 35 chairs in both sets).</p> <p>c. In math journals, have the students create a representation (e.g., array or picture illustrating the grouping) of the process that they completed using manipulatives. Write the two equations that are equivalent to the given representations, and solve for the product.</p>	<p>3. Fact families—reinforce the principles of related facts using triangle flash cards or Memory-type games.</p>	<p>2. In cooperative learning groups, have each group create either an equation or a model. Then have the students rotate through each group and construct an equivalent form of what is observed.</p>	<p>Additional Resources</p> <p>*This resource includes a short lesson and a game for students to practice building arrays, writing equations, and solving for a product: http://Mathstory.com/mathlessons/arrayrace.htm</p> <p>*Locate the activity “Groups of Dogs” at the following site for students to look at arrays using objects: http://www.internet4classrooms.com/grade_level_help/solve_problems_math_fourth_4th_grade.htm</p>