Unit Map 2012-2013

Monroe #2 - Orleans BOCES (Regional Collaboration)

Collaboration / Math 3* / Grade 3 (Math Regional Curriculum)

Wednesday, September 26, 2012, 2:38PM

Standard/Module: Proficiency in multiplication and division 3.OA.5 (Week 1, 18 Weeks)

Stage 1: Desired Results

Standards Focus

- Major (70%) connects with 3.OA.1-4, 3.OA.6-7

Grade 3 Proficiency Maps.pdf

Standards

NYS: CCLS:Mathematics, NYS: 3rd Grade , Operations & Algebraic Thinking

3.OA Understand properties of multiplication and the relationship between multiplication and division.

- 5. Apply properties of operations as strategies to multiply and divide.

Enduring Understandings	Essential Questions
Know or recognize 6X4=4X6 (Commutative); (3X5)X2=3X(5X2) (Associative); 8X7=(8X5)+(8X2) (Distributive) Fact families (multiplication and division are related)	1. What is the (commutative, associative, distributive) property of multiplication? 2. How would you create a number sentence to show an example of each of the properties?

Critical Content

Properties of operations as strategies to multiply and divide

-Commutative property of multiplication

-Associative property of multiplication

-Distributive property

Skills	Vocabulary
Apply the properties of operation as strategies to multiply and divide.	Tier 2: properties, number sentence Tier 3: Commutative Property, Associative Property, Distributive Property

Stage 2: Assessment Evidence

Assessments

Apply properties as strategies to multiply and divide

Formative: Oral: Presentation

Each group of students is given a product to work with and they prepare a presentation to show how they can apply the commutative, associative, and distributive properties to achieve the same result. It is best to choose multiplication facts that are tough for the students to remember (for example 48, 56, 42, etc.)

Stage 3: Learning Plan

Learning Activities	Resources
Students work on building more complex arrays and building equal groups with a given number of objects. Attention should be given to how many rows or columns can be made for a given number as this visually represents the factors for the given number. Students should be reminded that the criteria for an authentic "array" is that it forms a rectangle. Once an array is built, it can be viewed as x columns and y rows, or moved to be y columns and x rows, but the total amount still remains. Experiment with skip counting on a number line. For example, what happens if I jump by 4 five times? What happens if I jump by 5 four times?	www.illuminations.nctm.org www.illustrativemathematics.org

Differentiation Opportunities

Student use graph paper (CM or 1 inch) to draw the arrays that they build with square tiles. This provides an opportunity for students to document their findings.

Show students how products are related to other sets of factors. For example, if I know 3 x 4 = 12, and I double the 4, then my product doubles to get 3 x 8 = 24.

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