Unit Map 2012-2013

Monroe #2 - Orleans BOCES (Regional Collaboration)

Collaboration / Math 6* / Grade 6 (Math Regional Curriculum)

Wednesday, October 31, 2012, 11:53AM

Standard/Module: Proficiency with Expressions and Equations 6.EE.4 (Week 7, 5 Weeks)

Stage 1: Desired Results

Standards Focus

- Major (70%) 6.NS.3

6th Grade CCS Map.pdf

Standards

NYS: CCLS:Mathematics, NYS: 6th Grade , Expressions & Equations

6.EE Apply and extend previous understandings of arithmetic to algebraic expressions.

- 4. Identify when two expressions are equivalent (i.e., when the two expressions name the same number regardless of which value is substituted into them).

Enduring Understandings	Essential Questions
1. Recognize when two expressions are equivalent	1. How can you prove two expressions are equivalent? 2. How can two different expressions be equivalent?

Critical Content

1. Equivalent expressions

Skills	Vocabulary
1. Identify when two expressions are equivalent. 2. Prove two expressions are equivalent through substitution and computation.	Tier 2 expression base power notation factor variable

	term constant translate evaluate simplify sum difference product quotient formula Tier 3 equivalent expressions exponent standard form exponential form factor form expanded form coefficient distributive property like terms

Stage 2: Assessment Evidence

Assessments

Skill based
Formative: Performance: Skill Demonstration

Are the following expressions equivalent?

$x + x + 1 + 1 = 2x + 2$

$5(x + 3) = 5x + 5$

Problem based
Formative: Performance: Authentic Task

Have students generate equivalent expressions for the number 48, using at least two operations and verifying that their notation is correct.

Stage 3: Learning Plan

Learning Activities	Resources
1. Use substitution to verify that both expressions are equivalent (e.g., $3(2 + x) = 6 + x$) is not true. Substitute any number for x; the expressions have different values, therefore they are not equivalent. (Make sure students try more than one number to make sure it works, because 0 will make this statement true.) 2. Present multiple expressions and ask students to determine if they are equivalent using substitution.	http://engageny.org/common-core/ http://illustrativemathematics.org/ www.livebinders.com/play/play/52180 http://illuminations.nctm.org/ http://www.mathsisfun.com/geometry/polyhedron.html http://www.korthalsaltes.com/ http://www.mathwire.com/numbersense/

	numbsense.html

Differentiation Opportunities

Area models from elementary can be used to illustrate the distributive property with variables.

Scaffold questions.

Have students work in pairs and before they simplify an expression have one partner explain what the expression means mathematically. This step might help prevent students from misunderstanding what the math symbols truly represent.

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