Unit Map 2012-2013

Monroe #2 - Orleans BOCES (Regional Collaboration)

Collaboration / Math 4* / Grade 4 (Math Regional Curriculum)

Wednesday, October 31, 2012, 10:26AM

Standard/Module: Proficiency in Base Ten - 4.NBT.4(F) (Week 1, 6 Weeks)

Stage 1: Desired Results

Standards Focus

- Major (70%) Connects with 4.NBT.5, 4.NBT.6, 4.OA.2, and 4.OA.3

4th Grade Proficiency Map.pdf

Standards

NYS: CCLS:Mathematics, NYS: 4th Grade , Number & Operations in Base Ten

4.NBT Use place value understanding and properties of operations to perform multi-digit arithmetic.

- 4. Fluently add and subtract multi-digit whole numbers using the standard algorithm.

Enduring Understandings

1. The addition and subtraction algorithms are a process that allows you to solve any addition or subtraction problem.
2. Place value and strategies using properties of can operations can help when adding and/or subtracting whole numbers.

Essential Questions

1. What is a whole number?
2. What are the steps you go through when adding multi-digit whole numbers?
3. What are the steps you go through when subtracting multi-digit whole numbers?
4. Why is place value important when adding and subtracting?
5. Can you subtract a larger number from a smaller number?
6. What is "borrowing" and when do you have to use this?
7. When do you "carry" a number?

Critical Content

1. Multi-digit whole numbers
2. Review of place value
3. Review of properties of operations
4. Addition algorithm/subtraction algorithm

Note: Students should be fluent in adding and subtraction within 1,000,000

Skills

1. Add and subtract multi-digit whole numbers using the addition and subtraction algorithm.
2. Use place value and property of operation strategies to reinforce the addition and subtraction algorithms.

Vocabulary

Tier 2: add, subtract

	Tier 3: multi-digit whole number, standard addition and subtraction algorithm

Stage 2: Assessment Evidence

Assessments

Add and Subtract
Formative: Test: Standardized

Students are given a variety of addition and subtraction problems to solve. These problems should include re-grouping across 9's and 0's, problems that involve re-grouping in some place values, but not in others, and problems involving re-grouping across all place values. Watch for patterns of mistakes in certain types of problems.

Stage 3: Learning Plan

Learning Activities	Resources
Daily practice with adding and subtracting multi-digit numbers. Error analysis of "mystery student" work	www.illustrativemathematics.org www.illuminations.nctm.org

Differentiation Opportunities

This is a skill that is often challenging for struggling learners to master. Practice with easy numbers first, and be sure to give a variety of problems. Often times the problems occur when students over-generalize a regrouping strategy and this often happens when students have not seen a variety of problems (such as re-grouping in some place values but not in others). Base-ten blocks (both physical and virtual) might be helpful for this. Gradually move students away from the base ten blocks into using only numbers.

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