# Unit Map 2012-2013

***Monroe #2 - Orleans BOCES (Regional Collaboration)***

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

Wednesday, October 31, 2012, 10:36AM

**Standard/Module: Proficiency in Base Ten - 4.NBT.6** (Week 9, 9 Weeks)

## Stage 1: Desired Results

### Standards Focus

- Major (70%) Connects with 4.NBT.4(F) and 4.NBT.5

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.

- 6. Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

| Enduring Understandings | Essential Questions |
|---|---|
| 1. An algorithm as well as many other strategies can help find quotients.<br>2. When dividing whole numbers you can have a remainder.<br>3. Properties of operations help with dividing. | 1. Can you explain what a quotient is?<br>2. Can you explain what a remainder is?<br>3. How do you answer a word problem involving division when you have a remainder?<br>4. What is a dividend and a divisor?<br>5. Can you explain the algorithm of division step by step?<br>6. How is place value important when dividing? |

### Critical Content

1. Whole-number quotients
2. Remainders
3. Four-digit dividends
4. One-digit divisor
5. Division Strategies based on :

- algorithm
- place value/expanded form
- properties of operations (commutative, associative, distributive, identities, inverses, zero property)

- relationship between multiplication and division
- equations
- rectangular arrays
- area models

| Skills | Vocabulary |
| --- | --- |
| 1. Find whole-number quotients and remainders with up to 4-digit dividends and 1-digit divisors.<br><br>2. Use strategies based on:<br><br>▪ place value<br>▪ properties of operations<br>▪ relationship between multiplication and division<br>▪ algorithm<br><br>3. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models. | Tier 2: multiply, divide, strategies<br><br>Tier 3: whole-number quotients, remainder, 4-digit ,<br><br>1-digit, dividend, divisor, place value, expanded form, equation, rectangular array, area model, properties of operations (commutative, associative, distributive, identities, inverses, zero property) |

## Stage 2: Assessment Evidence

**Assessments**

**Formative: Other: Quiz**

Give students 5 division questions and ask them to draw and explain their solutions.

## Stage 3: Learning Plan

| Learning Activities | Resources |
| --- | --- |
| Students need opportunities to develop their understandings by using problems in and out of context.<br><br>Start with a student's understanding of a certain strategy, and then make intentional, clear-cut connections for the student to the standard algorithm. This allows the student to gain understanding of the algorithm rather than just memorize certain steps to follow.<br><br>Sometimes students benefit from 'being the teacher' to an imaginary student who is having difficulties applying standard algorithms in situations. To promote | www.illustrativemathematics.org<br><br>www.illuminations.nctm.org |

| | |
|---|---|
| understanding, use examples of student work that have been done incorrectly and ask students to provide feedback about the student work.<br><br>It is very important for some students to talk through their understanding of connections between different strategies and standard algorithms. Give students many opportunities to talk with classmates about how they could explain standard algorithms. Think-Pair-Share is a good protocol for all students. | |

**Differentiation Opportunities**

Differentiated group activities should be used to assess and give multiple practice activities to students at all developmental levels.

Use tiered lessons. Break your lesson up into two or three levels of difficulty, with the lowest level being the minimum requirement for your grade level. Assign students to the level of difficulty you feel is best for them, or allow them to try a few problems from each level to find their best fit. Each student needs to complete just one of the three levels to officially complete the assignment.

Use technology. Many online games are easy to differentiate, as they offer a variety of levels of gameplay. You can assign the proper level to your students or once again allow the students to find their level of best fit.

<< Previous Year

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