Unit Map 2012-2013

Monroe #2 - Orleans BOCES (Regional Collaboration)

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

Wednesday, October 31, 2012, 10:42AM

Standard/Module: Proficiency in Fractions - 4.NF.2 (Week 23, 9 Weeks)

Stage 1: Desired Results

Standards Focus

- Major (70%) Connects with 4.NF.1

4th Grade Proficiency Map.pdf

Standards

NYS: CCLS:Mathematics, NYS: 4th Grade , Number & Operations—Fractions

4.NF Extend understanding of fraction equivalence and ordering.

- 2. Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as 1/2. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols >, =, or

Enduring Understandings

1. Fractions with different numerators and denominators can be compared.
2. Comparisons are valid only when the two fractions refer to the same whole.
3. In order to compare fractions common denominators need to be found or visual fraction models can be used.

Essential Questions

1. How do we compare two fractions with different numerators and different denominators?
2. How do we find a common denominator?
3. What are some ways that we can justify our conclusions when comparing fractions?
4. How can benchmark fractions help you compare fractions?

Critical Content

1. Fraction
2. Numerator
3. Denominator
4. Common denominators and numerators
5. Benchmark fractions
6. Visual fraction models(Focus should be here)
7. Comparing fractions

- use symbols <, >, = to compare

Skills

Vocabulary

1. Students will compare two fractions with different numerators and different denominators by creating common denominators or numerators. 2. Students will compare two fractions with different numerators and different denominators by comparing to a benchmark fraction such as ½. 3. Students will recognize that comparisons are valid only when the two fractions refer to the same whole. 4. Students will record the comparisons using greater than, less than, or equal to symbols and justify the conclusions; ex. using a visual fraction model. 5. Students will draw fraction models to help them compare and use reasoning skills based on fraction benchmarks.	Tier 2: compare, fractions, symbols, visual fraction model Tier 3: numerator, denominator, common denominators and numerators, benchmark fraction, valid, conclusion, greater than, less than, equal, justify

Stage 2: Assessment Evidence

Assessments

Formative: Other: Quiz

Students will be given 5 word problems involving comparing fractions with unlike denominators. Students will be asked to find the answer by making model drawings.

Stage 3: Learning Plan

Learning Activities	Resources
Students should use models to compare two fractions with different denominators by creating common denominators or numerators. The models should be the same (both fractions shown using fraction bars or both fractions using circular models) so that the models represent the same whole. The models should be represented in drawings. Students should also use **benchmark fractions** such as 1/2 to compare two fractions and explain their reasoning. The result of the comparisons should be recorded using >, < and = symbols.	www.illustrativemathematics.org www.illuminations.nctm.org

Students think that when generating equivalent fractions they need to multiply or divide either the numerator or denominator, such as, changing 1/2 to sixths. They would multiply the denominator by 3 to get 1/6, instead of multiplying the numerator by 3 also. Their focus is only on the multiple of the denominator, not the whole fraction. It's important that students use a fraction in the form of **one** such as 3/3 so that the numerator and denominator do not contain the original numerator or denominator.	

Differentiation Opportunities

Model different strategies.

Differentiated practice with a partner so students can problem solve and brainstorm ideas.

Provide differentiated worksheets with prompts provided on some, but the same questions on all.

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