STUDENT LEARNING MAP – MATH 5 – UNIT 2

Unit Topic: Fraction Number Sense and Problem Solving

Standards:
SOL 5.3 – **Identify** and **describe** the characteristics of even and odd numbers and prime and composite numbers.
SOL 5.2 – **Represent** and **identify** equivalencies among fractions and decimals, with or without models, and **compare** and **order** fractions, mixed numbers, and/or decimals from least to greatest and greatest to least.
SOL 5.6 – **Solve** single-step and multi-step practical problems involving addition and subtraction with fractions and mixed numbers and **solve** single-step practical problems involving multiplication of a whole number and a proper fraction with models. All answers must be **expressed** in simplest form.

Unit Essential Question: How do I use my knowledge of classifying numbers and fraction/decimal relationships to help me solve practical problems with fractions?

Unit Dates: Oct. 22 - Dec. 19 **Assessment Date:** Dec. 12 **Duration:** 37 days

Lesson 1 Focus Even, Odd, Prime and Composite Numbers **Standards (calculator)** SOL 5.3 – Odd/Even & Prime/Composite Numbers **Students Will Know…** - the rules for determining an even or odd number - the rules for adding, and subtracting even and odd numbers - a prime number has exactly two factors - a composite number has three or more factors **Key Content Vocabulary** divisible, even, odd, prime, composite, prime factorization, factor **Key Academic Vocabulary** demonstrate, explain, identify, justify	**Students Will Be Able To…** **- Identify** prime and composite numbers less than or equal to 100. **- Demonstrate** and **justify** why a number is prime or composite using concrete or pictorial representations. - **Identify** which numbers are even or odd. **- Demonstrate** and **explain** why a number is even or odd using concrete or pictorial representations. -**Demonstrate** and **explain** why the sum or difference of two numbers is even or odd.	**Lesson Essential Question 1** **How can I identify and justify why a number is even, odd, prime or composite?**
Lesson 2 Focus Decimal / Fraction Equivalents **Standards (no calculator)** SOL 5.2a – Decimal/Fraction Equivalents **Students Will Know…** - the procedure to convert a fraction to a decimal equivalent and vice versa - how to use number lines and other manipulatives to represent the equivalent relationship between fractions and decimals **Key Content Vocabulary** numerator, denominator, equivalent, terminating decimal, repeating decimal, non-terminating decimal **Key Academic Vocabulary** represent, identify, justify, convert, concrete, pictorial	**Students Will Be Able To…** **- Represent** fractions with denominators that are thirds, eighths, and factors of 100 in their equivalent decimal form with concrete or pictorial models. **- Represent** decimals in their equivalent fraction form with concrete or pictorial models. - **Identify** equivalent relationships between decimals and fractions that are thirds, eighths, and factors of 100 without models.	**Lesson Essential Question 2** **How do I represent, recognize, and name equivalent relationships between decimals and fractions?**
Lesson 3 Focus Compare and Order Fractions and Decimals	**Students Will Be Able To…**	**Lesson Essential Question 3**

Standards (no calculator) SOL 5.2b–Compare & Order Fractions and Decimals **Students Will Know…** -how to compare decimals up to the thousandths place -final answers should be given in original form -how to properly place decimals and fractions on a number line **Key Content Vocabulary** compare, order, greater than, less than **Key Academic Vocabulary** ascending, descending	**- Compare** and **order** a given set of no more than four decimals, fractions, and/or mixed numbers, with denominators of 12 or less, from least to greatest and greatest to least. **- Compare** decimals through the thousandths, fractions, and/or mixed numbers, with denominators of 12 or less, using the symbols >, <, = and ≠.	**How do I compare and order decimals, fractions, and mixed numbers?**
Lesson 4 Focus Fraction Problem Solving: Simplifying Fractions **Standards (no calculator)** SOL 5.6 *4th grade review skill needed* **Students Will Know…** -simplest form can be found by determining the GCF -when a fraction is in simplest form -a unit fraction has a numerator of 1 **Key Content Vocabulary** simplify, greatest common factor, lowest terms **Key Academic Vocabulary** justify, analyze	**Students Will Be Able To…** - **Express** sums, differences, and products of fractions and mixed numbers in simplest form.	**Lesson Essential Question 4** **How can I use number sense to express fractions and mixed numbers in simplest form?**
Lesson 5 Focus Fraction Problem Solving: Addition and Subtraction **Standards (no calculator)** SOL 5.6a – Fraction Problem Solving **Students Will Know…** -how to identify proper fractions, improper fractions and mixed numbers -how to find like/common denominators **Key Content Vocabulary** proper fraction, improper fraction, mixed number, like denominators, unlike denominators, least common denominator **Key Academic Vocabulary** express, analyze, practical problem	**Students Will Be Able To…** **- Solve** single-step and multi-step practical problems involving addition and subtraction with fractions and mixed numbers having like or unlike denominators. - **Express** sums and differences in simplest form.	**Lesson Essential Question 5** **How do I use addition and subtraction to solve practical problems involving fractions and mixed numbers?**
Lesson 6 Focus Fraction Problem Solving: Multiplication **Standards (no calculator)** SOL 5.6b – Fraction Problem Solving **Students Will Know…** -how to find the product of a whole number and a proper fraction using models and other strategies (this determines the product of a part of a whole number) **Key Content Vocabulary** inverse, product, whole number, part of a whole (proper fraction) **Key Academic Vocabulary** represent, determine	**Students Will Be Able To…** **- Solve** single-step practical problems involving multiplication of a whole number (limited to 12 or less) and a proper fraction with models. **- Express** products in simplest form. **- Represent** products using visual fractions to model the inverse property of multiplication.	**Lesson Essential Question 6** **How do I use models to solve practical problems involving the multiplication of a whole number and a fraction?**